



**International  
Science Council**  
The global voice for science

## 2nd General Assembly

**INTERNATIONAL SCIENCE COUNCIL**

11 - 15 October 2021 (online)

# Candidates standing for election to the incoming ISC Governing Board - shortlist

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For noting

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Candidates standing for election to the incoming Governing Board of the International Science Council (ISC) at the 2nd ISC General Assembly (online, 11 – 15 October 2021).



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## **CANDIDATES FOR OFFICER POSITIONS**

### **President-elect**

- Motoko Kotani
- Pamela Matson

### **Vice-President for Finance**

- Orhan Altan
- Domenico Giardini
- Sawako Shirahase

### **Vice-President for Freedom and Responsibility in Science**

- Anne Husebekk
- Hans Thybo

### **Vice-President for Outreach and Engagement**

- Salim Abdool Karim
  - Huadong Guo
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**Motoko Kotani**

Executive Vice-President, Tohoku University



Nominator: **International Mathematical Union (IMU)**

Position: **President-elect**

Nationality: **Japanese**

Country of residence: **Japan**

Discipline: **Mathematics**

Born in: **1960**

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**Motivational statement**

*“The union of ICSU/ISSC into the ISC in 2018 is one that I acknowledged with great respect. It thereby became the premier representative and global voice for all science. In the pandemic, we realize even more keenly the importance of science for society, policy making, and risk-communication. Scientists can contribute to these issues most effectively when working in unison, taking a collaborative approach to tackle global issues.*

*I fully subscribe to the missions of the ISC, and agree with the directions stated in the Action plan 2019-2021 and the Draft Action plan 2022-2024.*

*They are very similar to Society 5.0 in Japan’s Science and Technology Basic Plan, which I participated in formulating and executing. It is a society where the well-being of humankind is achieved through sustainable development via advancement in S&T. It emphasizes that the key to realizing this concept is the integration of knowledge through dialogue between the humanities, social sciences, natural sciences, and technology. It also discusses new societal values derived through digital transformation.*

*If selected as President-elect, I would contribute to the ISC’s mission through my knowledge and experience, gained over many years of engaging in policy making, as well as my expertise as a mathematician who has dedicated herself to developing data-driven science through interdisciplinary collaboration. I am equally motivated to create an inclusive society with diverse values, providing viewpoints from an Asian context.*

*To strengthen the position of the ISC as the global voice of science, across scientific fields, countries and regions, cultures and societies, gender and diversity, I believe the ISC should work to support academic freedom and responsibility and recover trust in science by showing that scientific creativity can provide insights to and stewardship for the future.*

*All these factors will undoubtedly help strengthen interaction between the ISC and its members.”*

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## **Academic background**

The nominee's expertise is in mathematics. She graduated from University of Tokyo in 1983 and obtained a Doctor of Science in Mathematics in 1990 from Tokyo Metropolitan University. She started her academic career as a lecturer at Toho University, and then moved to Tohoku University in 1999 as an Associate Professor at the Mathematical Institute, Graduate School of Science, before becoming a full Professor in 2004. She was further awarded a Distinguished Professorship (2008-2013). She visited the Max Planck Institute for Mathematics, Germany (1993-1994), IHES, France (2001), and Isaac Newton Institute, UK.

Her interest has been in geometric analysis, related to mathematical physics. She was awarded the 25th Saruhashi Prize for “Study of crystal lattice via discrete geometric analysis” in 2005. While she works in pure mathematics, she is actively in communication with researchers in other scientific fields. She has led several big research projects bridging mathematics and materials science. Based on her experience and achievement both in research and management, she was appointed as Director of the Advanced Institute for Materials Research, Tohoku University in 2012, an institute with 200 researchers, first established under the national program “World Premier International Research Center Initiative” in 2007.

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## **Past and current positions**

The nominee holds/held the following positions:

Tohoku University:

- Executive Vice President for Research (April 2020-);
- Associate Executive Vice President (2014-2019);
- Principal Investigator (2011-)/Director (2012-2019), Advanced Institute for Materials Research;
- Professor (2004-), Mathematical Institute;

RIKEN, Japan's largest comprehensive research institute:

- Executive Director (4/2017-3/2020)

Her social contributions are varied:

- Executive member, Council of Science, Technology and Innovation (2014-) comprised of the Prime Minister, relevant ministers, and experts to determine national policy regarding science and technology



- Member, Council of Science of Japan, the representative organization of the Japanese scientist community ranging across all fields of science, incorporating the humanities, social sciences, life sciences, natural sciences, and engineering (2017-)
- Member, Board of Governors, Okinawa Institute of Science and Technology School Corporation (2014-)
- President of the Mathematical Society of Japan (2015-2016), board member (2008-)
- Member of several MEXT and Cabinet Office committees
- Member of advisory committees of several national research institutes (such as National Institute of Advanced Industrial Science and Technology, National Institute of Informatics, National Institute of Information and Communications Technology, National Institute for Materials Science)
- Member of various prize selection committees (Kyoto/IMU/ICIAM)
- Project leader for promotion of women in science

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#### **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

The nominee is active in two ISC member organizations, the International Mathematical Union (IMU) and the Science Council of Japan (SCJ). Regarding the IMU, the nominee is a member of the Adhering Organization for Japan and a member of the IMU's Committee for Women in Mathematics (CWM), which promotes international contact between national and regional organizations for women and mathematics. It led the project "A Global Approach to the Gender Gap in Mathematical and Natural Sciences". It has 150 CWM ambassadors, who exchange information on activities and initiatives globally and organize meetings. The nominee organized the first meeting of Asian CWM ambassadors to discuss the creation of a platform for Asian women in mathematics.

She is also a member of the SCJ, which is under the ISC. The SCJ deliberates on important issues concerning science, and helps to improve and develop science in Japan. It comprises three sections: Section I: Humanities and Social Sciences; Section II: Life Sciences; Section III: Physical Sciences and Engineering. It discusses global agendas through Science for Society. The nominee is active in Section III, and the subcommittees for Mathematical Science and for Materials Science.

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#### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

As an expert on the role and application of science & technology (S&T) within society, she has contributed to national policy making regarding S&T, also advising universities and national institutes. Among others, she made a notable contribution in deciding the 4th (2010-2014), 5th (2015-2019), and 6th (2020-2024) national basic plan of S&T. Through her experience (10 years+), she is acutely able to grasp points of technical information, and offers her opinion in a way that can be understood by people across different sectors (politicians, industry, the young and elderly)

Diversity: Japan is behind in the gender issue. According to the Global Gender Gap Report, it was ranked 110 among 149 countries in 2019, and 121 among 153 in 2020. She was the project leader of Tohoku University's campaign to encourage women to make a career in science (2006-2010).

She started the Kato Sechi program at RIKEN to promote outstanding women leaders in science. Introducing the program, she argued that diversity is a driving force of research dynamics.

As a member of CWM, she currently leads on establishing the platform "Asian-Oceanian Women in Mathematics", designed to promote international communication among women and encourage young women to pursue a career in mathematics.

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### **Experience in scientific, academic and other relevant organizations**

The nominee is an accomplished research leader. It was a big challenge assuming the role of Director of the Advanced Institute for Materials Science, her expertise being in mathematics while most members were outstanding researchers in materials research. It was a bold decision by the university president back then. She presented an attractive vision, a clear road map, and both challenges and incentives for interdisciplinary research to its members. She was fortunate to publish a paper in Science within one year (2013), proof of her vision and strategy. She is good at communicating with people from diverse backgrounds, sharing ideas and thoughts. Through her passion and dedication, members were gradually convinced and worked happily with her. She is active in introducing a Research DX environment and data-driven approaches in research.

As Executive Vice President for Research, Tohoku University, she initiated Starting Grants for Research toward a Resilient Society, and Prominent Research fellowships, an initiative for young excellent researchers.

She has participated in international conferences, workshops, and meetings, both mathematical ones and those for collaboration agreements with foreign research institutes, or related to S&T policy making, e.g. she was a representative at the UN workshop/forum on STI for SDGs in 2019.

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### **Why is the nominee particularly suited to hold the proposed position?**

We think that Kotani would be an outstanding President-elect for the ISC as she has a proven track record as a science leader. She has been instrumental in developing national science and technology policy.

She has played a central role both in research and in policy making on science and technology for more than ten years. She is extremely motivated, and willing to put in as much effort as possible to accomplish required outcomes and desired goals. Through her rich experience as explained above, she cultivated a strong sense of science for society, as well as society supported science, and has actively promoted science for global agendas within society.

She is a good communicator with strong interpersonal skills, able to interact at ease with people from different backgrounds and cultures, with different thoughts and perspectives, always eager to listen to

their voices. It may be because she herself has always been a front runner and a representative of under-represented groups.

**Pamela A. Matson**

Goldman Professor, School of Earth Energy and Environmental Sciences, Stanford University



Nominator: **U.S. National Academy of Sciences**

Position: **President-elect**

Nationality: **U.S. American**

Country of residence: **U.S.A.**

Discipline: **Environmental science**

Born in: **1953**

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**Motivational statement**

*“Throughout my career I have worked on scientific problems of critical importance for human well-being and the well-being of our planetary life support systems. With teams of scientists from different disciplines, and eventually with the participation of decision makers as well, I have experienced the joy of systems-level discovery and the challenges of having knowledge be used in decision making and problem solving. As a researcher and leader, I am dedicated to ensuring that what we learn through research is actually useful, usable and used in decision making. Doing so requires that we learn the lessons of the past and engage in building trusted knowledge and sharing it effectively; recognize the complexity of the social-environmental systems in which we work and create pathways for change in them; and bring multiple perspectives and voices to the table as we do so. The vision and mission of the International Science Council are things I believe in, and I would be honored to further them.*

*My commitment to the international science community and motivation to engage in scientific leadership on its behalf are based on formative opportunities early in my science career. Active engagement in the International Geosphere-Biosphere Program and ICSU’s Earth System Science Program was a gift to young scientists like me; the interdisciplinary and collaborative nature of what we were trying to do set me on a path for life. That international experience and many others taught me respect for all kinds of science, the importance of including diverse voices and ways of knowing, the great value in providing opportunities for young scientists as well the more experienced, the rewards of collaborative leadership, and the essential need to effectively link scientific knowledge and action. I have carried those learnings with me in all that I do.”*

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## **Academic background**

Dr. Matson holds a Bachelor of Science degree with double majors in Biology and Literature from the University of Wisconsin (Eau Claire), a Master degree in Environmental Science and Policy from Indiana University's School of Public and Environmental Affairs, a Doctorate in Forest Ecology from Oregon State University, and honorary doctorates from Princeton, McGill and Arizona State Universities. She spent ten years as a research scientist with NASA-Ames Research Center before moving to a professorship at the University of California Berkeley and, in 1997, to Stanford University. She holds honorary doctorates from Princeton, McGill and Arizona State Universities.

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## **Past and current positions**

Dr. Matson is the Richard and Rhoda Goldman Professor of Environmental Studies, Director of the Change Leadership for Sustainability, and Senior Fellow at the Woods Institute for the Environment at Stanford University. In this role, she leads the graduate program on Sustainability Science and Practice. Her research addresses a range of environment and sustainability issues, including sustainability of agricultural systems, vulnerability and resilience of particular people and places to climate change, and characteristics of science that can contribute to sustainability transitions at scale. From 2002-2017, she served as dean of Stanford University's School of Earth, Energy and Environmental Sciences, building interdisciplinary departments and educational programs focused on resources, environment and sustainability, as well as co-leading university-wide interdisciplinary initiatives.

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## **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

Dr. Matson was elected to the National Academy of Sciences in 1994. She served on the US National Academy of Science Board on Sustainable Development and co-wrote the National Research Council's volume *Our Common Journey: A transition toward sustainability* (1999); she also led the NRC committee on America's Climate Choices: Advancing the Science of Climate Change. She was the founding chair of the National Academies Roundtable on Science and Technology for Sustainability. Other contributions include:

- Progress, Challenges, and Opportunities for Sustainability Science: A Workshop (Co-Chair; 9/1/2020 — 5/31/2021)
- Division on Earth and Life Studies Division Committee (Member; 2018-present)
- Science Ambassador Program Advisory Board (Member; 2009-2014)
- Committee on Climate, Energy, and National Security (Member; 2008-2013)
- Planning Committee on Fostering Partnerships and Linkages in Sustainability Science and Innovation – A Symposium (Chair; 2011-2012)
- Proceedings of the National Academy of Sciences Editorial Board (Member; 2005-2012)



- Committee on Sustainable Products and Services (Member; 2008-2010)
  - Steering Committee on Federal Sustainability Research and Development: A Workshop (Co-Chair; 2007-2008)
  - Member, National Academy of Sciences Board on Sustainable Development (1995- 2000)
  - Chair, Section 63, National Academy of Sciences
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**Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Dr. Matson's is a globally-recognized leader in many of the areas in which the ISC is involved, including environmental and agricultural sustainability, vulnerability and resilience of particular people and places to climate change, and characteristics of science that can contribute to sustainability transitions at scale. She has provided extraordinary leadership to many important organizations, and has deep understanding of global and regional science needs and policies. She is widely published, and selected publications include *Seeds of Sustainability: Lessons from the Birthplace of the Green Revolution in Agriculture* (2012) and *Pursuing Sustainability: A Guide to the Science and Practice* (2016).

Current and past work with ISC allied organizations includes:

- Member, FutureEarth Advisory Council (2018 – 2020)
  - Member, U.S. National Committee of the Scientific Committee on Problems of the Environment (SCOPE) (1996- 2000)
  - Member and Executive Committee Member, Scientific Advisory Committee, International Geosphere-Biosphere Program (1997- 2001)
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**Experience in scientific, academic and other relevant organizations**

Dr. Matson serves as Chair of the Board of Trustees of the World Wildlife Fund-US and as a board member of the World Wildlife Fund-International and several university advisory boards. She is a past President of the Ecological Society of America. She is an elected member of the American Academy of Arts and Sciences, and an American Association for the Advancement of Science Fellow. She received a MacArthur Foundation Award, contributed to the award of the Nobel Prize to the IPCC, and is an Einstein Fellow of the Chinese Academy of Sciences.

Recent affiliations with other relevant organizations include:

- Chair, Gund Institute (University of Vermont) Advisory Board (2018 – Present)
- Member, Wrigley Institute (Arizona State University) Advisory Board (2004-Present)
- Director, Leopold Leadership Program (2005-2019)

- Member, Board of Directors, Foundation for Food and Agriculture Research (2014 – 2015)
- Member, ClimateWorks Board of Trustees (2011-2020)

At Stanford University, Dr. Matson has held a number of high level leadership roles, including Naramore Dean of the School of Earth, Energy and Environmental Sciences (2002-2017); founding Director of the Sustainability Science and Practice Graduate Program (2017-present); Director of the Earth Systems Program (1998-2002); and Co-Director of the Center for Environmental Science and Policy (1999-2002).

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### **Why is the nominee particularly suited to hold the proposed position?**

Dr. Matson is particularly suited to hold the position of president-elect of the ISC for several reasons. First, she has impeccable scientific credentials and an outstanding reputation in the international scientific community. Second, she is an excellent collaborative leader, and consistently demonstrates vision. Third, she knows how to formulate and shape organizational goals, strategy and implementation. Fourth, she has a solid understanding of important emerging and current scientific challenges at the global level. Fifth, has worked with a number of important international scientific organizations, including a number of ISC partners. She understands and values partnerships and collaborations, and works to enhance them. Finally, she grasps the important relationship between science and policy, and for much of her career has worked to advance that.

## **Orhan Altan**

*Past President, Honorary Member, International Society for Photogrammetry and Remote Sensing (ISPRS)*



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### **Motivational statement**

*“A Scientist must contribute to society to the best of his/her capability. Practicing quality work is where the responsibilities begin. As individual members of society and as citizen, one must bring specialized knowledge that may be essential to addressing global concerns. This valuable attitude and other valuable perspectives, ensure an effective application of scientific education and expertise to societal and global concerns.*

*During my professional and personal life; the mottos stated above have been an anchor in all my decision making and prioritization. Having grown up in a family of academic background (My father was a Professor of Mathematics at the Istanbul University and my late wife was a Professor of Reinforced Concrete at the Istanbul Technical University) has laid the foundation of my willingness to become an academician and this thought matured during my education at German School Istanbul and ITU.*

*I will be most honored if I am to be elected for this position as the ISC Vice-President for Finance who is the leading organization in this category and together we will achieve the objective of collaboration and commitment to societal issues.*

*I believe I will be able to bring my cross-cultural awareness, focus for excellence and networking skills to the position. Having served as Vice Dean of the Faculty of Civil Engineering at the Technical University for 8 years; I have extensive experience in terms of project management, funding, budgeting. I also served as the Secretary General and President of ISPRS and focused on raising great amounts of funds for the organization and gaining several Sustaining Members to support the Union.*

*As a tenured and hardworking colleague, I hope to bring my innovative and collaborative perspective into the equation.”*

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## **Academic background**

- 1965 – 1970 Studied at the Faculty of Civil Engineering at Istanbul Technical University and graduated with Dipl.- Ing. in Civil Engineering
  - 1972-1973 Research at ETH-Zurich Institute of Geodesy and Photogrammetry
  - 1974 PhD
  - 1977-1979 6 months spent on research at the Institute of Applications of Geodesy to Civil Engineering at the Stuttgart University, sponsored by TÜBITAK, followed by a period of one and half years sponsored by the Alexander von Humboldt Foundation.
  - 1979 University Associate Professor
  - 1990-2021 Worked as Guest Professor in Stuttgart, Berlin, Munich Technical Universities (Germany), ETH-Zurich (Switzerland), Beijing University of Architecture and Civil Engineering, University of Wuhan (China), Corresponding Member of the German Geodetic Commission at the Bavarian Academy of Sciences and co-chair of the Advisory Board for Geodesy. Honorary Member of Science Academy and Honorary Fellow Indian Remote Sensing Society, Member of the International Astronautical Academy.
  - Published more than 200 scientific papers in scientific journals and conferences, and editor or co-editor of more than 20 international books.
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## **Past and current positions**

- 1988- 2013 University Professor; and several times Head of Department of Geodesy and Photogrammetry
  - 1989-2010 Head of the Division of Photogrammetry
  - 1994-1997 Vice-Dean of the Faculty of Civil Engineering for 2 periods
  - 2000-2006 CIPA International Committee of Architectural Photogrammetry Executive Board Member
  - 6th May 2013 retired working as Work Package Leader for various EU Projects
  - 2018 World Bank Consultant on the improving resilience and resilience impact of national land and geospatial systems.
  - 2011 – 2018 ICSU Executive member and member and Chair of the Finance Committee.
  - 2005 – till now ISPRS representative on UNOOSA and COPUOS
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## **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

- 1980 – 1996 Working group member and/or chair in different ISPRS WGs
- 2000-2004 ISPRS Congress Director/Organizer of the 2004 Congress in Istanbul
- 2004-2008 Secretary-General of ISPRS
- 2008-2012 President of ISPRS
- 2012-2016 1st Vice President of ISPRS.

- 2016 Honorary Member of ISPRS; given to individuals whose efforts in photogrammetry and remote sensing are exceptionally distinguished, not more than 10 at any time.

Orhan Altan has introduced many important initiatives into ISPRS including the establishment of the Student Consortium which laid the basis for attracting more young scientists into the society; he was instrumental in setting up an agreement to have the ISPRS proceedings published professionally and has thus provided the necessary quality of these proceedings to be included into major indexing databases such as the Web of Science and SCOPUS; he has worked with the Joint Board of Geospatial Societies (JBGIS) and the UN Office of Outer Space Affairs to produce booklets on the value of geospatial information for disaster management

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### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

He has a great capacity to reach different groups with various backgrounds as witnessed through his capacity in group leader positions. Therefore we believe he will be an excellent person matching the ISC's goals, by interacting with its membership and supporting global and regional science initiatives, strengthening the ISC's role in the global community. Working in the ICSU Executive Board and its committees, he is aware of, and understands, global and regional issues in both sciences itself and the relationship between science and the international agenda.

He is fully aware of the responsibilities he should carry should he be elected, and has no medical or other problems related to travel.

Orhan Altan is fluent in English and German, as well as Turkish which has enabled him to build bridges across Europe and Asia. His contribution to the development and long-term sustainability of ISPRS, and his distinguished academic achievements, combined with his diplomacy and charm were the citations on his laudation when he was nominated and elected as Honorary Member of ISPRS; given to individuals whose efforts in photogrammetry and remote sensing are exceptionally distinguished, not more than 10 at any time.

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### **Experience in scientific, academic and other relevant organizations**

Orhan Altan's research activities have concentrated on the use of photogrammetry for applications in engineering, particularly using close-range photogrammetry for architecture and deformation measurement. He has worked extensively on the collection and analysis of information for managing disasters, both in damage assessment after earthquakes and the use of geospatial information systems to provide decision support for this work.

His work has been recognized by his appointment to international working groups:

Together with a group in ICSU he contributed to the Publications Ayala et al.: Disaster risks research and assessment to promote risk reduction and management; Susan Cutter et al.: Global risks: Pool knowledge to stem losses from disasters and to the ICSU Report on Open access to scientific data and literature and the assessment of research by metrics.



In March 2019, he acted as a Member of the Expert Group DDE (Deep Digital Earth) Science Program of the International Union of Geological Sciences.

He is Chair of the ISC GeoUnions Standing Committee on Disaster and Risk Reduction, consisting of 16 members representing 7 Unions among ISC GeoUnions (<http://www.iscgacrdm.com/>).

Currently, he is giving courses in Master and Ph.D. Level at the Beijing University of Civil Engineering and Architecture and Liesmars (Laboratory for Information Engineering in Surveying, Mapping, and Remote Sensing) Wuhan University and various European Universities.

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### **Why is the nominee particularly suited to hold the proposed position?**

Having a scientific background, and having worked as a university professor at various Universities in the world, being a manager and an administrator in scientific organizations, especially in the Council of ISPRS for more than 16 years, and having 7 years experience as ICSU Executive Board Member, I believe that I am suited to serve in a highly responsible position in ISC.

I am convinced that the impact of globalization cannot be managed only by classic diplomacy; and that considerations of global demands for energy, advocacy for actions to mitigate the impacts of climate change, and economic diplomacy for such issues as the Millennium Development Goals will have more sway in boosting scientific influence in the international arena.

Coming from Turkey, a country at the juncture of both the East and West, I have established good relations with scientists from countries in this region and I can contribute to establish better peaceful relations to the region and also give first-hand information about the concerns of academic freedom.

## **Domenico Giardini**

*Professor of Seismology and Geodynamics, ETH Zurich, Switzerland*



Nominator: **International Union of Geodesy and Geophysics (IUGG)**

Position: **Vice-President for Finance**

Nationality: **Swiss, Italian**

Country of residence: **Switzerland**

Discipline: **Physics**

Born in: **1958**

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### **Motivational statement**

*“My career was driven by four complementary motivations, which are the same that motivate me to apply for a ISC Officer position.*

*Scientific excellence. Competitive research, training of excellent PhD and undergraduate students, fostering of researchers and engineers in teams, the establishment of novel research infrastructures, are the key building blocks I pursued in the positions I held.*

*Cooperation. The largest scientific and technological challenges as well as many of the contemporary challenges (such as the energy transition or climate change mitigation) cannot be tackled without a wide cooperation across disciplines, across borders and across generations. I pursued the establishment of centers of excellence, programs and large research infrastructures which would make this cooperation possible, and I led commissions and associations at national, regional and global scale to strengthen long-term cooperation.*

*Access. I always believed that those fortunate to work in the leading research and academic institutions have the duty to dedicate part of their time, energies and resources to ensure that access to scientific excellence, research infrastructures and frontier research is enlarged to all that deserve it. Following this principle, I invested in projects in different countries and regions of the world, involving local scientists and engineers to develop the local infrastructure and scientific capacity.*

*Transfer. Ensuring that the outcome of scientific R&D result in solutions and products and establishing the correct structures and programs to foster the integration between academic institutions, private sector and public administration are required to tackle and solve societal challenges. I strived to pursue this integration, in fields like seismic hazard assessment for building codes, or national energy strategy.*

*In my experience, the ISC and its Unions embody these driving principles. This provides the motivation for me to contribute to the success of ISC and to serve in the Governing Board of ISC.”*

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## **Academic background**

Giardini received the Master (Laurea) in Physics in 1981 and the Ph.D. in Physics in 1987 at the University of Bologna, Italy. He was Postdoctoral Fellow and Research Associate at the Department of Geological Sciences, Harvard University, USA (1982-1986), Researcher and Senior Researcher at the National Institute of Geophysics (1987-1992), Associate Professor of Seismology at the University of Roma La Sapienza (1992) and at the University of Roma Tre (1993-1997), and was appointed in 1997 as Professor of Seismology and Geodynamics in the Department of Earth Sciences and as Director of the Swiss Seismological Service at ETH Zurich, Switzerland.

At ETH he was Director of the Institute of Geophysics (1999-2002) and Chairman of the Department of Earth Science (2004-2006). He was Visiting Professor at the SeismoLab and Division of Geology and Planetary Sciences, Caltech (2003) and Nanyang Visiting Professor at NTU, Singapore (2011-2013).

He was the President of the National Institute of Geophysics and Volcanology of Italy (INGV, 2011-2013), Chair of the Scientific Advisory Council, Helmholtz Geosciences Center Potsdam (GFZ, 2016-2021) and member of the Conseil d'Administration, Institut de Physique du Globe, Paris (IPGP, 2010-2013) and of the Administration Council of the National Institute of Geophysics and Volcanology, Italy (INGV, 2012-2015).

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## **Past and current positions**

In addition to the academic positions, Giardini served in national and international organizations, as Director of the Swiss Seismological Service (1997-2011); Delegate, European Open Science Cloud (2020-); Head, Swiss Competence Center on Energy Research – Supply of Electricity (SCCER-SoE, 2013-2021); Chair, Seismic Risk Section, Major Risks Commission, Office of the Prime Minister, Italy (2012-2017); Member of the Swiss Committee on Space Research, Swiss Academy of Sciences (2009-2015); Swiss delegate, WG Environment, European Strategy Forum on Research Infrastructures (ESFRI, 2007-2018); Founder and First Director, Swiss Competence Center Environment and Sustainability (2006-2009); Chair of the Board of Directors, Organizations & Research Facilities for European Seismology (ORFEUS, 1999-2007); Member of the Scientific and Technical Board, ILP/UNESCO Earthquakes and Megacities Initiative (EMI, 1998-2002); Member of the Governing Council, International Seismological Centre (1997-2015).

He served as chair or member in national and international review committee, including the Overseas Research Advisory Committee, Pohang seismic risk, Korean Government (2018-2019), the Evaluation Group of the National Seismic and Tsunami Hazard Models, Italy (2017-2018), the Review Team of the Seismic Safety Assessment of Nuclear Power Plants, Swiss Nuclear Safety Inspectorate (1999-2016), the Working Group on Seismic Safety of Large Dams, Switzerland (1999-2005).

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### **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

The nominee served in different capacities in the International Association of Seismology & Physics of the Earth Interior (IASPEI), as member of IASPEI Commissions, Secretary (1989-1994) and Chair (2002-2007) of the IASPEI's International Federation of Digital Seismic Networks (FDSN), President of the IASPEI's European Seismological Commission (ESC, 2006-2008), and as First Vice-President (1999-2003) and President of IASPEI (2011-2015) and Member of the Executive Committee and Board (1999-2019).

He also represented IASPEI in large global programs, as Coordinator of the UN/IDNDR Global Seismic Hazard Assessment Program (GSHAP, 1991-2000), as FDSN/IASPEI Delegate in the UN Group on Earth Observations (GEO, 2005-2007) and the Co-Founder of the OECD Global Earthquake Model (GEM) and IASPEI Representative in the GEM Governing Board (2007-2018).

He served for the International Union of Geodesy and Geophysics as Member of the Executive Committee (2011-2015), of the Union Visioning Committee (2016-2018) and of the Union Commission on Climatic and Environmental Change (CCEC, 2015-2023).

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### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

The nominee's expertise and career fulfil the ISC's criteria of vision and exceptional achievement, recognized experience and distinction to be nominated as Officer or Board member and would strengthen the Council's mission and long-term goals.

The proven experience in leading organizations and science programs of global and regional dimensions would foster the ISC's global role and reach. The high international and regional standing and scientific recognition would enhance the status, accessibility and impact of the ISC in global issues. The experience in working with partners and consortia ranging from scientific institutions to private and industry sectors to governmental agencies, provides a unique understanding of emerging and current issues of societal relevance, from natural and man-induced hazards to energy policy to the UN goals for climate change mitigation.

The nominee has proven the expertise required to serve in the ISC's Standing Committees or Governing Board, and to lead the advisory work of the Committees in areas of science planning, outreach and engagement, freedom and responsibility in science, as well as finances.

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### **Experience in scientific, academic and other relevant organizations**

The nominee maintains a very active scientific career, with over 350 referenced publications in international peer-reviewed journals, 20'500 citations, H-index 80 and 64 PhD Theses. His R&D interests covered: deep earthquakes, Earth free oscillations, mantle and core structure, moment tensor

inversion, waveform modeling, seismic hazard and risk assessment, planetary seismology, induced seismicity, geo-energy, energy system modeling, deep underground laboratories, gravitational waves.

He coordinated EU projects to network Seismology and Earthquake Engineering Research Infrastructures for Europe (NERIES, NERA, SERA), for the assessment of seismic hazard for the European building code EuroCode8 (SHARE) and for the risk assessment for critical infrastructures (STREST). He was co-PI in European projects for the development of space electronics, geo-energy, seismic hazard and risk and geophysical modeling.

He coordinates the EU ERC Synergy project FEAR: Fault Activation and Earthquake Rupture (2020-2026), conducted in the Bedretto Underground Laboratory established deep under the Alps.

He initiated the European Plate Observing System (EPOS) and was co-PI in the EU projects assisting the EPOS Preparatory, Implementation and Sustainability Phases (2008-2022).

He participates and delivers hardware for the NASA InSight mission to Mars (landed 26.11.2018) and the ESA mission LISA: Laser Interferometer Space Antenna for the detection of gravitational waves.

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### **Why is the nominee particularly suited to hold the proposed position?**

During his career, the nominee has accumulated a number of key experiences and demonstrated unique capabilities:

As coordinator of international programs (e.g., the UN/IDNDR Global Seismic Hazard Assessment Program) and president of scientific associations, he showed great attention to the global dimension but also to the participation of national partners and the inclusion of scientists from all regions of the globe; for example, under his presidency, the FDSN doubled its national partnership and IASPEI established the African Seismological Commission and the Latin American Commission;

He demonstrated unique management and financial skills in establishing and directing large programs, institutes, associations, research infrastructures, research institutions and academic units, with attention to both the scientific stature and to the financial sustainability;

He showed attention to the transfer of scientific results in areas of critical societal relevance (e.g., energy transition and natural hazards) by coordinating key projects in different regions of the globe;

He leads and works with large consortia of partners from academy and private sectors;

He proved to have excellent communication skills and the readiness to invest the required energy, dedication and attention to different opinions when assuming a new charge.



**Sawako Shirahase**

Professor of Sociology, The University of Tokyo



Nominator: **Science Council of Japan**

Position: **Vice-President for Finance**

Nationality: **Japanese**

Country of residence: **Japan**

Discipline: **Sociology**

Born in: **1958**

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**Motivational statement**

*“The most important motivation of mine to accept the candidacy as Vice-President for Finance of the ISC is to contribute to making academic communities in different situations across the world united, and promoting and maximizing the academic strength. The role of science is now more important than ever under various challenges: COVID-19 pandemic, environmental problems, and societal issues, and I would be more than honoured to encourage and promote the importance of science from diversified perspective with my experience fully utilised to serve as Vice President Finance of the ISA. Further, I like to take the lead in strengthening the ties among scientists between the East and the West and to make their roles more diverse and more critical in making our society more equal, safer, and more innovative.*

*I believe that it is very critical that the ISC promotes education and training programs on global issues, including grants, particularly for the younger generation, because they suffer most from the current COVID-19 pandemic in various ways. I commit myself to organize it as a prioritized agenda of the next board from intergenerational justice, focusing on financial perspective.*

*Japan faces various social issues, represented by its super-aging society and many natural disasters ahead of other countries.*

*I have an advantage in showing Japan’s experiences and sharing them with our colleagues all over the world.*

*Issues on poverty, inequality, gender gap, the welfare and medical systems, and the environment are commonly found in all societies, and it is crucial that scientists with different disciplines, including humanities and social sciences, participate and perform different regional background work on these issues together. Thus, I like to promote interdisciplinary dialogues among ISC Members. As international collaborations and communications become increasingly important, I believe my*

*international experiences and networks could be helpful for accelerating solutions to these pressing problems.*

*I have had much valuable experience since joining the Committee of Freedom and Responsibility of Science in 2019. It is important that we focus on what freedom means, and on how scientists should demonstrate their responsibility to society; these should not be unidimensional or uniformly defined. And it's similar for common social issues: we all share common problems such as COVID-19, even though the degrees and patterns in actual problems differ by nation and region."*

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## **Academic background**

Sawako Shirahase is Professor of Sociology in the Graduate School of Humanities and Sociology, the University of Tokyo. She received her D.Phil. in Sociology from University of Oxford. The title of her dissertation was "Women in the Labour Market: Mobility and Work History of Japanese Women." She continues to work on social inequality issues focusing on demography, the labour market, and the social security system from gender and intergenerational perspectives. She took the lead in conducting the major sociological survey in 2015, which has been conducted every 10 years since 1955, and she has been the principal investigator of this large project consisting of 100 researchers in Japan for five years since 2013. She has solid experience and is actively involved in international academic community. Shirahase has disseminated her work through publishing books and papers and giving lectures in public both in English and Japanese; most recently, the three volumes of social stratification in the highly aging society with low fertility, Japan in which she is an editor in chief and also contributes papers are published from the University of Tokyo Press in 2021.

Her main field, inequality and demography, is one of most global social issues, and it is her strength as a candidate to hold an internationally wide network not only in sociology, but also in the social sciences and Japan and Asian studies.

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## **Past and current positions**

Professor Shirahase joined the University of Tokyo in 2006, and has served as Vice-Dean of the Faculty of Letters for two years from 2014. She served as the Executive Vice President for International Affairs and Public Relations from 2019 to 2021. She was the first female faculty to hold this position at the University of Tokyo (10,000 faculty and staff).

She is a Director of the UTokyo Center for Contemporary Japanese Studies (TCJS), which she founded in 2020 aiming to encourage to develop global academic network, particularly for early-career researchers and students, and to let them more actively involved in global research collaborations.

She currently serves as a Vice President for Finance and Membership of the International Sociological Association (ISA) (5,800 members worldwide). She now initiates a financial reform responding to various changes related to COVID-19 pandemic to make ISA more sustainable financially.

She has been a member of the Committee for Freedom and Responsibility in Science (CFRS) of the ISC since July 2019. She is currently engaged in several key positions on national government councils, such as:

- the Science and Technology Council, Ministry of Education, Culture, Sports, Science and Technology since 2016
- a member of the Reconstruction Promotion Committee of the Reconstruction Agency, reflecting the Tohoku disaster in 2017
- a member of Council for Gender Equality, Cabinet Office in 2021
- a Council member of Bureau of Social Welfare and Public Health, Tokyo Metropolitan Government since 2017
- an Executive Board member at the Tokyo Organising Committee of the Olympic and Paralympic Games

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#### **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

Professor Shirahase was elected to a Member of the Science Council of Japan in 2008 and then elected to a Council member in 2020. She has participated 12 different committees and subcommittees which cover a broad range of subjects of social science, such as:

- Declining Birthrate and Aging Subcommittee
- Gender Issues Subcommittee
- Multilateral Review Subcommittee on Inclusive Social Policy
- Social Statistics Survey Archive Subcommittee
- Review Committee for Problem Solving in a Declining Population Society

Besides these expert committee activities, Professor Shirahase has been a member of the ISC Relations Subcommittee, which the SCJ has set up as a primary place to discuss plans and strategies for the SCJ to best participate in the ISC's diversified global activities.

In September 2020 Professor Shirahase organized the International Conference on Science and Technology for Sustainability 2020. With the participation of Professor Daya Reddy and Professor Elisa Reis from the ISC, two-day conference conducted under the theme of "Social Inclusion in the Global Era—Sustainable post-COVID-19 Society—" was successful, stimulating active discussions among panellists and audiences in and out of Japan.

## **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

About the mission of the ISC:

Professor Shirahase desires to contribute to making the ISC's global voice for science a truly global one with a higher level of diversity, inclusivity and equity across fields and regions. She has a solid track record of doing so through her tremendous experiences in academic organizations like the ISA, the UTokyo Center for Contemporary Japanese Studies and others.

About the required range of qualities:

Professor Shirahase is exceptionally competent not only as a leading sociologist, but is also an internationally recognized social scientist who has worked with researchers of related fields such as economics, political science, and demography. Her past and present engagements in science-policy-society communications, as mentioned above, demonstrate that she has a high awareness and understanding of emerging and current issues in both science and in the relationship between science and the international agenda.

About the role of the Governing Board:

Strong leadership, vision, expertise, and passion are critical attributes to those who is to lead a large organization like the ISC. Professor Shirahase has demonstrated all of them in her wide range of academic and social engagements, as described above, in past and current positions.

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## **Experience in scientific, academic and other relevant organizations**

Professor Shirahase has been a member of the executive committee of the International Sociological Association (ISA) since 2014, and she is currently a Vice President for Finance and Membership. One key discussion that she has led in the ISA is how to make the ISA more regionally balanced and to offer better access, particularly from those in low-income countries.

Now, under the COVID-19 pandemic, she is a major board member at ISA who make decisions on how to provide various assistance and support and to redistribute their asset for those with serious disadvantages, particularly in the Global South.

She founded the UTokyo Center for Contemporary Japanese Studies (TCJS) in 2020, the first university-wide organization in which Japan-related research is explicitly promoted. The TCJS aims to share with the world the experience of Japan facing various social challenges ahead of other countries. Japan is at the frontier of major societal and environmental challenges, including an aging population, declining fertility rates, and susceptibility to large-scale natural disasters. It also faces problems that are common to many nations, such as growing socioeconomic inequality and its implications for democratic representation. She addresses these regional challenges from a global perspective.

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### **Why is the nominee particularly suited to hold the proposed position?**

The ISC's Action Plan 2019-2021 states: "The ISC continues to be generously supported by membership dues and by project grants from external donors. Yet the raised ambitions for an influential future that accompanied the creation of the Council, and which are reflected in this Action Plan, require a step change in the Council's resource mobilization strategy."

Such a situation can be commonly found across international academic communities, and the ISA (the International Sociological Association) is not the exception. This is the area where Professor Shirahase has worked on, taking a lead as the Vice President for Finance and Membership of the ISA. With rich knowledge and expertise, she strongly believes she can make a significant contribution in the VP for Finance position for which she is standing as a candidate. Professor Shirahase recognizes that we all face financial challenges while situation of each member varies.

Professor Shirahase is an outstanding competent candidate for a Vice President for Finance for the following reasons.

First, Professor Shirahase has a good deal of academic expertise not only sociological field per se, but also interdisciplinary research with other social sciences on global issues on socio-economic inequality, demographic transformation including aging, and welfare and social security system.

Second, she has an ample amount of experience as the Vice President for Finance of the ISA to discuss and initiate some reforms to adopt newly emerging challenges including COVID-19 pandemic. We are facing uncertainties and serious disparities, and all academic associations share these problems including the ISA. The ISA has 5,781 members and 110 collective members of national associations as of March 2021, and majority are derived from high-income countries based on the World Bank's main criterion. Professor Shirahase has made efforts to mitigate economic disadvantages from low-income countries, particularly Global South in participating in academic activities, and as a result, at the last Forum of ISA in 2020, a large number of participants from medium and low-income countries could be found. She knows how these issues are of great importance but difficult to be solved, and such of her experience is also her strength to serve as a Vice President for Finance in the ISC.

Third, Professor Shirahase has a good deal of experiences of science-policy dialogues with the Japanese government committees, addressing issues such as gender equity, disaster recovery from the Great earthquake and others, with the EBPM approach based on empirical data.

Professor Shirahase is a candidate able to make our academic community further effective, impactful, unified and collaborative.



## **Anne Husebekk**

Rector, UiT – The Arctic University of Norway



Nominator: **The Norwegian Academy of Science and Letters**

Position: **Vice-President for Freedom and Responsibility in Science**

Nationality: **Norwegian**

Country of residence: **Norway**

Discipline: **Medicine**

Born in: **1955**

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### **Motivational statement**

*“After a long career as a scientist and positions related to science policy and leadership, I am convinced that there is an unlimited need for research both with regard to basic and applied science to combat the climate crisis, to improve health and welfare, to fight hunger and achieve the Agenda 2030 and the UN SDGs. The world needs technological improvement both to create enough renewable energy and to make smart solutions in all aspects. Societal challenges have to be met by science-based solutions. I am motivated to fight against fake news and conspiracy. I would like to improve the general trust in science and make the working conditions for scientist safe and autonomous. I will also work hard to secure open access to publication and open science in general.*

*ISC is well suited for the global position to fight for the value, impact and openness of research and I would be proud to be part ISC and I am prepared to spend the necessary time needed for doing what is expected for Vice-President for Freedom and Responsibility in Science or an ordinary board member.”*

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### **Academic background**

- Education: Candidatus medicinae (MD), University of Tromsø, 1982; Doctor Medicinae (Dr.Med.), University of Tromsø, 1989
- Internship: Community Hospital Volda 1982, Finnsnes County 1983 (18 months)
- Research Fellowship: Norwegian Research Council, University of Tromsø, 1984/1987 (3 years)

- International Research Fellowship: NIH, NCI, 1991/1992 (1 year)
- Residency: Department of Immunology and Transfusion Medicine, University Hospital North Norway 1987/1991
- Certified specialist: Immunology and Transfusion medicine, Norwegian Medical Association, 1991

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### **Past and current positions**

- Senior Consultant: Department of Laboratory Medicine, University Hospital North Norway, from 1992-2006, 2011-2013
- Head of department: Department of Immunology and Transfusion Medicine, University Hospital North Norway, 1994/95 and 1999/98
- Professor: Professor (Immunology), Faculty of Health Sciences, University of Tromsø, Norway. 2002-
- Visiting Scientist: NIH, Department of Transfusion medicine 1991/1992 and 1997/98 (10 months each time)
- Institute Curie, Paris, France 2003/ 2004 (10 months)
- Director: Research and Education at the University Hospital North Norway 2006-2011
- Visiting professor: Rigshospitalet, Copenhagen 010111-300611
- Rector/president: UiT The Arctic University of Norway 2013- 310721

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### **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

Anne Husebekk is since 2017 a member of the Norwegian Academy of Science and Letters.

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### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Science is global and results from science have to be used as basis for many political decisions within countries and across borders. If scientific basis for decisions is not applied, the results may be detrimental. This means that international organizations that can address international challenges and use scientific results from many studies to give science advice are of great value. As a scientist and a rector for a comprehensive university with substantial international collaboration, she is well aware of the need for science advice and the power of science diplomacy. In the case of UiT the collaboration with Russian universities is of value, but also Arctic universities in general. This means also to care for and defend free and responsible practice of science.

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### **Experience in scientific, academic and other relevant organizations**

Her main experience in science is related to the field of immunology and transfusion medicine the interesting maternal tolerance of a fetus who is half paternal during pregnancy. Sometimes there is a break of tolerance, and the mother develops antibodies towards fetal blood cells i.e. red blood cells and platelets. In the case of platelets, she has worked all the way from basic immunology to a vaccine that will protect the fetus from maternal antibodies. This vaccine is now in clinical trial. This means that during her career she has worked in all parts of the ecosystem leading from basic research to a vaccine which could be useful to prevent a complication in pregnancy. This work has included a lot of international collaboration. The understanding that is the basis for the vaccine can be applied in other situations for instance to understand why the human immune system tolerate cancer cells and how break of tolerance can be induced in future cancer vaccines. From the present corona pandemics we have experienced how medical improvements is based on international collaboration both to understand the virus and develop vaccines.

Her engagement in The international society for blood transfusion (vice-president) is valuable for a board position in ISC.

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### **Why is the nominee particularly suited to hold the proposed position?**

The nominee has been scientist in medical research for many years, with national and international experience. Also, the nominee has had position within the Norwegian Research Council and for 8 years being the rector of one (out of four) classical universities in Norway. The combination of longtime experience in research, from basic research to translational research and development of a vaccine which is now in clinical trial and research policy development, development of research strategies for the university and the network called University of the Arctic is valuable as a background for ISC work. UiT has a large network of collaborating universities in particular in the North (i.e. Nordic countries, Canada, USA, Russia) but also in the South (i.e. Europe, Korea, Japan, China, Singapore) and she has visited many universities in her time as rector. This has given her insight in international university policies and how research is governed and regarded in different countries. This make a good basis for the work in ISC.

## Hans Thybo

Member, Royal Danish Academy of Science and Letters



Nominator: **Royal Danish Academy of Science and Letters**

Position: **Vice-President for Freedom and Responsibility in Science**

Nationality: **Danish**

Country of residence: **Denmark**

Discipline: **Geophysics**

Born in: **1954**

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### Motivational statement

*“First of all, I fully agree with the vision of ISC that excellence in sciences should be translated into policy making and socio-economic development. My experience shows that high-quality science grows where researchers have universal access to data, have right to open debate, and are respected by society for the value of their science.*

*My personal experience shows that the rights of scientists are not given. Intellectual rights are under pressure everywhere, often due to new public management. I wish to participate in the struggle for universality in science, and to promote a world where scientists enjoy their rights to carry out free and responsible research based on own ideas.*

*Equal access to information is essential to scientific development. I was an initiator of the pan-European geoscientific data programme EPOS and I was President of the first open-access geoscientific publishing scientific society, EGU.*

*I have always supported the CFRS activities for securing the right of individuals and groups to communicate freely with colleagues over the world. CFRS has improved opportunities for e.g. free travel for scientists, although the world is not ideal.*

*The change in CFRS focus to strategic discussions should continue and develop. CFRS should take initiative to liaise with related committees worldwide for stronger impact. CFRS needs more interaction between meetings for faster action while maintaining its thorough research on each case.*

*I believe that my general background makes me suitable for leading CFRS and participating*

*constructively in the other activities of ISC. I am a firm believer that free and responsible international collaboration is required for advancing science. I am good at keeping my feet on the ground, I analyse cases on the basis of principles, and I am result oriented. I will be honoured to take the lead in developing CFRS activities.”*

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## **Academic background**

PhD in Geology 1987, MSc in Geophysics 1982, BSc in Mathematics and Physics 1979 from University of Aarhus, Denmark; Studies at Technical University Delft, Netherlands 1981.

- 1998: Elected member of Royal Danish Academy of Sciences and Letters (RDASL)
- 2004: Fellow, Royal Astronomical Society, London
- 2004: Elected member of Academia Europaea
- 2010: Elected member of Norwegian Academy of Sciences and Letters
- 2012: Elected member of Danish Academy of Natural Sciences
- 2014: Fellow of Geological Society of America
- 2013: Panel member, Albert Einstein Award from World Cultural Council
- 2013: Principal organiser of ICSU/CFRS symposium on Science and Policy Advice
- 2016: Honorary Editor of the journal Tectonophysics
- 2018: Recipient of 1000 Talents' Award, China
- 2019: Member of ISC's Committee for Freedom and Responsibility in Science

Editor and associate editor of 7 scientific journals; currently Editor-in-Chief of the journal Earth and Planetary Science Letters.

Initiator and former council member of the open-data organisation European Plate Observatory System (EPOS).

Founding member of European Geosciences Union (EGU), which has been a major driver for open-access publishing.

PI on ca. 60 International Collaborative Scientific Projects in most continents; initiator of extensive scientific collaboration between eastern and western Europe after the fall of the wall.

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## **Past and current positions**

### **Employment**

- 1986-2017: Ass. Professor and Professor of Geophysics, University of Copenhagen

- 1994: Visiting professor at Stanford University, California.
- 2004-2008: Department Chair, Geological Institute, University of Copenhagen
- 2016-2021: Professor, Centre for Earth Evolution and Dynamics, Univ. of Oslo
- 2017-: Professor, Eurasia Institute of Earth Sciences, Istanbul Technical University
- 2019- : Professor, China University of Geosciences, Wuhan

#### Selected posts of trust

- 2003-2010: Presidium member of Royal Danish Academy of Science and Letters
- 2004-2008: External council member, Science Faculty, University of Oslo
- 2011-2017: Vicepresident of Royal Danish Academy of Sciences and Letters
- 2013-2017: Overseas Expert for Chinese Academy of Sciences (CAS)
- 2014-: Board Member of Danish Academy of Natural Sciences
- 2014-2016: President, European Geosciences Union (EGU; 2013 & 2017 Vicepresident)
- 2016-: Honorary Editor of Tectonophysics
- 2017-: President, International Lithosphere Program (ILP)
- 2006-2017: Danish representative to ICSU

Member and chair of research councils and panels in Denmark, Sweden, Portugal, France, Russia, Netherlands, Croatia, USA and European Research Council

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#### **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

Hans Thybo has been an active member of the Royal Danish Academy of Sciences since 1998. He was member of the academy presidium 2003-2010 and, during 2011-2017, he was Vice-President of the academy and Chair of the Natural Science section of the academy.

He chaired the Danish National Committee for ICSU 2006-2017 and represented the academy in ICSU during this period. He actively promotes the value of free exchange of scientific ideas, and he is known for advocating a responsible conduct of science to students and colleagues.

Hans Thybo is an active promotor of inter-academy and international collaboration for improving conditions for the conduct of science.

He chaired the national committee for the ICSU/ISC related International Lithosphere program (ILP) 1998-2008.

Hans Thybo chaired the local organising committee for a CFRS-related symposium on Science and Policy Making held in the Danish Academy in 2013.

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### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Hans Thybo has long term interest in the relation between science and society, as well as the processes related to the interaction between scientists and politicians/administrators.

He is a member of CFRS and participates in the ISC writing group on a white paper on scientific freedom and responsibility in the 21st century.

He holds considerable experience with collaboration projects between academic researchers and private enterprises in the energy, mining and hydrological industry.

He holds broad international experience from scientific and societal collaboration in most continents. He has been host for more than 50 international researchers from a broad range of disciplines in Copenhagen.

He has extensive administrative experience from university, research advisory boards, scientific panels, funding panels and learned societies. He has been chair and president of learned societies, panels and advisory boards.

He is a popular invited speaker at scientific conferences, including presentations on the future of science and learned societies to e.g. Japan Geoscience Union, European Geoscience Society (geological survey collaboration), EPOS, European Geosciences Union, American Geophysical Union.

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### **Experience in scientific, academic and other relevant organizations**

Hans Thybo is a scientist with a research track-record in geosciences, including geophysics, seismology, and tectonics. He is an experienced advisor to students and administrators, as well as research institutions.

He has taken initiative to an impressive number of international collaborative research projects which have bridged the gaps between national research groups and institutions on most continents.

He holds considerable administrative experience as chair of department, leader of two research centres, and memberships of advisory boards to universities and other institutions. He has been member of an impressive number of advisory boards to scientific programmes, and he has been co-initiator of scientific programmes and organisations, including European Plate Observatory programme and European Geosciences Union (EGU), which is a global scientific organisation. As General Secretary, he was instrumental in building the structure EGU, which currently has around 20,000 members. He has been member and chair of research councils and panels in several countries.

Hans Thybo has been President of European Geosciences Union (EGU) and is currently President of International Lithosphere Program (ILP), which initiates and supports multi-disciplinary research programmes on the lithosphere and joins the interests of IUGG and IUGS. He was for 12 years the Danish representative to ICSU and ISC.



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**Why is the nominee particularly suited to hold the proposed position?**

Hans Thybo is known for his high degree of scientific and political integrity and his open-minded approach to discussion of scientific-political subjects, including controversial subjects in relation to freedom and responsibility in science in relation to e.g. freedom to travel and to participate in meetings for scientists, open and free scientific debate, and tenure as a fundamental requirement for scientific progress.

He is renowned for actively promoting the importance of free exchange of scientific ideas in broad international collaboration, independent of race, nationality, gender and position. He advocates responsible conduct of science and participates actively in the internal academy and public debate.

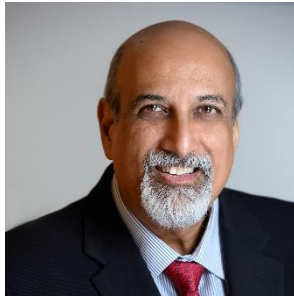
He has as chair of the Danish ICSU committee emphasised the importance of CFRS to the Danish community and has actively informed the academy and public about its activities and results.

He was chairing the local organising committee of the 2013 CFRS meeting in the Danish Academy on Science and Policy Advice.

Hans Thybo has through his professional career been promoting international collaboration between scientists on equal individual basis. He has taken leading roles in building structures that promote open-access to data and journals for all interested scientists.

## Salim Abdool Karim

Director, Centre for the AIDS Programme of Research in South Africa (CAPRISA)



Nominator: **National Research Foundation South Africa**

Position: **Vice-President for Outreach and Engagement**

Nationality: **South African**

Country of residence: **South Africa**

Discipline: **Medicine**

Born in: **1960**

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### Motivational statement

*“My research career spans more than 35 years, dedicated to HIV and tuberculosis epidemiological, and clinical and basic research, most of which has been undertaken in South Africa. More recently I have been focusing my attention on Covid-19. I served as the South African government’s chief scientific advisor on Covid-19 as the Chair of the Ministerial Advisory Committee for Covid-19 for the first year of the epidemic. I also serve as a Commissioner on the Lancet Commission on Covid-19, as a member of the Africa Task Force on Coronavirus and as co-Chair of the African Union’s Consortium for Covid-19 Vaccine Clinical Trials. I am actively involved in a range of initiatives that promote evidence-based policy. My efforts in this regard were recognised by Nature and Sense for Science, when I was awarded the joint (with Dr Fauci) 2020 John Maddox Prize for standing up for science. I continuously strive to contribute to building research capacity in South Africa, which is evident from my contributions within the Fogarty AIDS Training Programme. I currently serve as Chair of the WHO Strategic and Technical Advisory Committee for HIV and Hepatitis and as a member of the WHO Science Council as well as the Gates Foundation’s Scientific Advisory Board for Global Health. I serve as a research leader and advocate for the development of scientific research in South Africa and more broadly, in Africa. My role in this regard has been acknowledged and recognised by awards that I have received from several science academies. I trust that my contributions will assist the International Science Council’s vision to advance science as a global public good”*

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### Academic background

1. PhD, University of Natal, South Africa
2. MMed (Community Health), University of Natal, South Africa.
3. FFCH (Community Medicine), College of Medicine, South Africa.

4. Diploma in Datametrics (Computer Science), University of South Africa.
  5. MS (Epidemiology), School of Public Health, Columbia University, New York.
  6. MBChB, University of Natal, South Africa.
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### **Past and current positions**

Current appointments:

- 2019-Present: Adjunct Professor in Immunology and Infectious Diseases, Harvard University
- 2016-Present: CAPRISA Professor of Global Health, Department of Epidemiology, Columbia University (Professor with tenure)
- 2015-Present: Director: DSI-NRF Centre of Excellence in HIV Prevention (hosted by CAPRISA)
- 2014-Present: Director: MRC HIV-TB Pathogenesis and Treatment Research Unit (hosted by CAPRISA)
- 2011-Present: Associate, Ragon Institute of Massachusetts General Hospital, Massachusetts Institute of Technology and Harvard University

Selected previous positions held:

- 2012-2014: President, South African Medical Research Council (SAMRC)
  - 2008-2011: Honorary Professor in Public Health, Nelson R. Mandela School of Medicine, UKZN
  - 2005-2015: Pro Vice-Chancellor (Research), UKZN (as an employee)
  - 2001-2004: Deputy Vice-Chancellor (Research), University of Natal
  - 2000-2015: Professor of Clinical Epidemiology, Mailman School of Public Health, Columbia University, NY
  - 2000-2001: Director, HIV Prevention and Vaccine Research Unit, SAMRC
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### **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

Professor Salim Karim has served on many strategically important national and international Boards and Committees. He currently serves as the Director of the Centre of Excellence (CoE) in HIV Prevention, which is funded by the National Research Foundation (the ISC Member Organisation). The CoE in HIV Prevention is one of 15 CoEs across South Africa that were established to enhance the pursuit of research excellence and capacity development. Since its initiation in 2015, the CoE in HIV Prevention has had a significant impact on the global HIV response. Its research on community-based phylogenetic studies in 2016 revealed the Cycle of HIV Transmission. These findings have shaped the Joint United Nations Programme on HIV/AIDS (UNAIDS) report on The life-cycle

approach to HIV, which has been adopted by several countries in Africa. In South Africa's HIV National Strategic Plan, reducing the Cycle of HIV Transmission is listed as the highest priority. Researchers from the CoE in HIV Prevention have participated substantially in global policy development including the United Nations Declaration on ending AIDS, the Lancet-UNAIDS Commission on Defeating AIDS, World Health Organisation (WHO) antiretroviral treatment and prophylaxis guidelines, WHO policy on a public health approach to HIV testing and WHO guidelines on research on adolescents

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### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

1. Science policy: He has held advisory positions nationally, regionally and internationally, contributing to the science-policy interface. More recently, he has been contributing to the mitigation of the COVID-19 epidemic and served as the Chair of the South African Ministerial Advisory Committee on COVID-19. He is currently the Chair of the WHO Strategic and Technical Advisory Committee for HIV and Hepatitis, Member of the Scientific Advisory Board for Global Health at the Bill and Melinda Gates Foundation; Member of the WHO Science Council, the WHO HIV-TB Task Force and Member of Board of the Population Council.
  2. Higher education and science leadership: He is a globally recognised as a talented leader, visionary and driver of strategic initiatives. Through various portfolios, he is committed to strengthening the civic role and social responsibility of higher education, and the fundamental role of science and research for development.
  3. Multidisciplinarity, with a strong science-base: He has demonstrated an acute appreciation of inter-disciplinarity and multi-disciplinarity through his academic accomplishments and leadership on international science committees.
  4. Science diplomacy: His exceptional convening, negotiation and science diplomacy skills have enabled the establishment, strengthening and maintenance of strategic multi-sectoral partnerships and networks with the scientific, policy, private sector, and civil society communities.
- 

### **Experience in scientific, academic and other relevant organizations**

Prof Karim is a South African public health physician and clinical infectious diseases epidemiologist who has played a leading role in global health responses, with scientific discoveries that have impacted the landscape of HIV prevention and saved lives.

His research on HIV-TB treatment was adopted in the WHO treatment guidelines of this co-infection and has been implemented in most countries. These significant findings have had a marked impact on HIV prevention and TB-HIV treatment in Africa and globally. His scientific contributions include

over 400 peer-reviewed journal publications. He has received grants as Principal Investigator in excess of \$200million.

He is one of the world's most highly cited researchers being listed on the Web of Science's Clarivate Analytics annual list of the world's six thousand most influential researchers by citations in the sciences and social sciences since 2018.

He is a member of the Editorial Board of the New England Journal of Medicine. He serves on the International Advisory Boards of Lancet HIV and The Lancet – Global Health. He is also a member of the Editorial Boards of Journal of AIDS, AIDS Research and Human Retroviruses, HIV and Infectious Diseases, and AIDS Reviews. He is an elected Fellow on a number of Royal Societies and Academies.

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### **Why is the nominee particularly suited to hold the proposed position?**

Professor Karim has a reputation for principled leadership and is a strong proponent of evidence-based policy. His leadership in the HIV and Covid-19 pandemics has been inspiring, galvanizing communities, civil society bodies, governments, government funding agencies, international research organisations, private businesses and the media.

In Nature Medicine he has been described as “a visionary leader” with exceptional skills in change management. As President of the South African Medical Research Council, he created a new vibrant organisation with strategic mission, good governance, organizational efficiencies, improved staff morale, tripled the budget and increased its impact and international stature.

Equally adept in working with senior politicians / government officials, including Heads of States, and with communities, he is highly networked and has collaborated with key stakeholders in countries across the globe. He has a deep appreciation for the meaningful involvement of people living with HIV, and for promoting human rights and social justice. He is an articulate communicator with a high-impact media profile. He has extensive knowledge and experience of working with policy-making organizations such as WHO and UNAIDS and would be a valuable addition to an organisation that is a global voice for science.

## **Huadong Guo**

*Director General, International Research Center of Big Data for Sustainable Development Goals*



Nominator: **China Association for Science and Technology**

Position: **Vice-President for Outreach and Engagement**

Nationality: **Chinese**

Country of residence: **China**

Discipline: **Data science**

Born in: **1950**

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### **Motivational statement**

*“ISC, a distinguished science organization with a long history and new changes, is facing the challenges of scientific progress and human development “challenges compounded by the COVID-19 pandemic” while taking on more responsibilities to promote science for policy, policy for science, and science freedom. We should use more systematic and innovative thinking and actions to promote the development of ISC.*

*With roots in Earth sciences, I have always been conscious of the intricacies of natural systems and have gained awareness of the impacts humans have on these systems and their consequences. Earth observation tools have broadened my perspective about global, shared challenges beyond administrative and political demarcations. I have found science and technology to be reliable tools and the scientific method a dependable process to understand facts and develop solutions.*

*This opportunity at ISC is, for me, a natural step to continue forward on this path and share my knowledge and expertise to enable millions around the world, especially the young and individuals from backgrounds that limit their access to science and technology. I believe that my professional and research experiences can prove beneficial to promote the vision and mission of ISC in natural and social sciences. I hope that at ISC I can effectively pursue my passion for innovative solutions towards sustainable development, a passion I hold very dear and has been a focus of much of my recent endeavours.*

*My background has strong natural and social science components, enabling me to envision an integrated approach for dynamic and comprehensive understanding of large-scale features to aid UN strategic*

*frameworks including SDGs, climate change, and disaster risk reduction. This has motivated my support towards science for policy, and informs my views on open science to enable decision support, and my advocacy for values in science.”*

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## **Academic background**

Huadong Guo is a Professor of the Chinese Academy of Sciences (CAS) Aerospace Information Research Institute, and Chief Scientist of the International Research Center of Big Data for Sustainable Development Goals (CBAS) and the CAS Big Earth Data Science Engineering Program (CASEarth).

He is an Academician of CAS, Fellow of the World Academy of Sciences (TWAS), Foreign Member of the Russian Academy of Sciences, Foreign Member of the Finnish Society of Sciences and Letters, and Fellow of the International Eurasian Academy of Sciences (IEAS). He graduated from the Department of Geology at Nanjing University (1977) and received his MSc in Cartography and Remote Sensing at the University of CAS (1981). As a visiting scholar, he studied at Oregon State University, USA, from 1984 to 1985. He received an Honorary Doctorate of Science awarded by Curtin University, Australia.

His forty years of experiences have produced internationally recognized research on radar remote sensing, Digital Earth science, and Earth observation. He has been PI for over thirty major national projects in China, and PI for seven international radar remote sensing projects. He has published more than 510 papers and 24 books and is the awardee of 18 international and domestic prizes.

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## **Past and current positions**

Huadong Guo served on the UN 10-Member Group to support the Technology Facilitation Mechanism (TFM) for SDGs appointed by the UN Secretary-General. He was President of ICSU CODATA, President of ISC International Society for Digital Earth (ISDE), Chairman of ICORSE, Deputy Secretary-General of CAS, Director-General of the CAS Bureau of International Cooperation, Director-General of the CAS Institute of Remote Sensing Applications, Founding Director-General of the CAS Center for Earth Observation and Digital Earth and the CAS Institute of Remote Sensing and Digital Earth, and Director of the National Geo-informatics Center. Currently, he serves as Founding Director General of International Research Center of Big Data for Sustainable Development Goals. On its inauguration the center had received congratulatory video messages from UN Secretary-General António Guterres and 3 UN Under-Secretary-Generals, and congratulatory letter from Chinese President Xi. He is President of the China National Commission for ISC (ISC-CHINA), Director of the International Center on Space Technologies for Natural and Cultural Heritage (HIST) under the Auspices of UNESCO, Honorary President of ISDE, Ex-officio Member of Integrated Research on Disaster Risk (IRDR) co-sponsored by ISC and UNDRR, Technical Advisory Committee Member of the Commission on Science and Technology for Sustainable Development in the South (COMSATS), Chair of the Digital Belt and Road Program (DBAR), President of the Chinese National Committee for ISDE (ISDE-CHINA), Chairman of the China Committee for IRDR (IRDR-CHINA), and Editor-in-Chief of two scientific journals, International Journal of Digital Earth and Big Earth Data.

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### **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

Huadong Guo is currently President of ISC-CHINA, which was established by the China Association for Science and Technology (CAST) with the purpose to fulfill its responsibilities as a member of ISC, coordinating domestic natural and social sciences, and to promote scientific exchange and cooperation between institutes.

He is a prominent scientist in Digital Earth. He co-initiated ISDE, an ISC Affiliated Member, and served as its President and Secretary-General for over 14 years. He is also President of ISDE-CHINA.

Based on several of his achievements, scientific acumen, leadership qualities, and experience in disaster risk reduction, ICSU, ISSC, and UNISDR selected the institute where he served as Director-General to host the IRDR-IPO. CAST, one of the sponsors of IRDR, established IRDR-CHINA and appointed him as Chairman.

He also served as Executive Committee Member of CODATA from 2004 to 2010, and has been the National Delegate of CODATA-CHINA since 2008. It was the result of his efforts that the Data-intensive Science and Discovery CODATA 45 years on meeting was successfully held in Beijing, China, paving the way for data-driven science.

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### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Huadong Guo has extensive experience in scientific education, research, and management. He has served in and actively engaged with numerous international programs and organizations, giving him a unique perspective on global and national strategies for science-based policy and decision support systems.

1. In the UN 10-Member Group to support the TFM for SDGs, he worked to improve access to technology and data for SDGs in countries developing their scientific capacity. He creatively engaged scientists, policymakers, and international businesses to build consensus and inspire innovation.
2. He is a strong advocate of data-intensive science, and is working to improve data access and capacity in decision support and policy development. As President of ICSU CODATA, he promoted scientific big data and continues to advance big data concepts for SDGs in many countries in Asia and Africa.
3. He is a strong proponent of improving digital connectivity to all individuals regardless of nationality and has spearheaded the development of the CAS Earth Cloud Platform ensuring access to innovative solutions for all, especially for those in developing countries.
4. By establishing DBAR, he is working to improve scientific capacity globally by enhancing opportunities for engagement, exchange of ideas, knowledge dissemination, and collective regional sustainable development.

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## **Experience in scientific, academic and other relevant organizations**

Huadong Guo has made valuable contributions to ISC in his three positions there over 16 years.

1. As President of CODATA (2010 - 2014), he enhanced the role of big data in scientific research. He organized the first ICSU Workshop on Big Data for International Scientific Programmes in 2014, including CODATA, WDS, RDA, Future Earth, IRDR, ISDE, and GEO.
2. ISC and UNDRR selected his institute to host the IRDR-IPO, the first international office of this type hosted in Asia.
3. During his term as President of ISDE (2015 - 2019), the organization became an ISC Affiliated Member.

He is Founding Director of HIST under the Auspices of UNESCO and he initiated the ABCC Program (Australia, Brazil, Canada, and China) to conduct comparative studies for global environmental change using remote sensing. Realizing the need for an interdisciplinary approach to sustainable development, he initiated DBAR to facilitate cooperation, especially between Asia, Europe, and Africa. His institute was selected to host SDIM to conduct much-needed research and he was appointed Director. As Chair of the InterAcademy Panel's disaster mitigation project, he led a team representing eleven national academies to publish the report, Natural Disaster Mitigation.

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## **Why is the nominee particularly suited to hold the proposed position?**

As a prominent scientist in the field of Geosciences, Huadong Guo is dedicated to promoting big data in realizing SDGs, which resonates with the vision of ISC to advance science as a global public good. He is a strong advocate for science-driven policy and supports the idea of the TFM driven by Big Earth Data to serve the SDGs. He has made extensive contributions to the establishment of CBAS, the first-ever research agency with an aim to build a big data technology platform and research center to implement the SDGs.

From his experience as Deputy Secretary-General of CAS and Director-General of the CAS Bureau of International Cooperation 2002-2007, and through years of engagements in international activities, he has a strong sense of responsibility towards promoting science and technology that transcends disciplines, regions, and cultures, and advocates for integrating natural and social sciences. He has demonstrated a strong capability to initiate and operate international organizations and programs. He is committed to reducing the digital divide between developed and developing countries.

His extensive research experience and demonstrated capability to lead various scientific programs and societies makes him a confident choice and a suitable candidate for the role of ISC Vice-President.

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## CANDIDATES FOR ORDINARY MEMBER POSITIONS

- Christian Amatore
  - Karina Batthyány
  - Françoise Baylis
  - Geoffrey Boulton
  - Melody Burkins
  - Mei-Hung Chiu
  - Steven Chown
  - Pearl Dykstra
  - Anna Erdei
  - Terrence Forrester
  - Irvy Gledhill
  - Robin Grimes
  - Anet Režek Jambrak
  - Junji Koizumi
  - Byeong Gi Lee
  - Benedikt Löwe
  - Helena Nader
  - Mona Nemer
  - Walter Oyawa
  - Maria Paradiso
  - Clarissa Jazmin Rios Rojas
  - Alan Smeaton
  - Martin Visbeck
  - Nuri Yurdusev
  - Yongguan Zhu
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## Christian Amatore

Full Member of French Academy of Sciences and Emeritus Director in CNRS and Ecole Normale Supérieure (ENS)



Nominator: **Académie des Sciences, France**

Nationality: **French**

Country of residence: **France**

Discipline: **Chemistry**

Born in: **1951**

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### Motivational statement

*“Until now, although highly involved in research (above 500 publications in class A international journals, more than 70 supervisions of PhDs, some of them being co-supervised in developing countries) and teaching activities in France, as well as in several major world universities (Europe, USA, South America, China, Japan, North Africa), I always looked-for being involved in organizations aimed to help governmental bodies at the highest national level, and sometimes international (TWAS, IAP, SDG, academic advices to G7 & G20 states meetings), to understand emerging and current issues related to science or manage the complex relationships between science and political and economic agendas. Let me emphasize in particular three main missions:*

- In the High Council for Science and Technology created by President Jacques Chirac to personally advise French Republic Presidents on educational (attracting young women in scientific careers; universities autonomy), purely scientific (new technologies for a sustainable environment and more responsible energy use and production) and societal issues (science acceptability by populations increasingly enticed to fear science without seeing the benefits they enjoy daily);*
- The drafting of recommendations by Academies of Sciences for Heads of State during G7 and G20 meetings;*
- A strong involvement in the Committee for Developing Countries of the French Academy of Sciences for sub-Saharan Africa and organization of four North-South conferences involving French-speaking or English-speaking African countries.*

*Becoming Emeritus Professor offered me more time to dedicate to such inspiring missions which seem to me akin to those of ISC. Among these I wish to contribute to the creation of a central analytical*

*laboratory in sub-Saharan Africa with a triple goal: (i) allowing Africans to assess their environmental quality and remedy it, (ii) providing quantitative certifications for negotiating equitably their exportations, (iii) training advanced technicians who can then stimulate the economic activity of their countries.”*

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## **Academic background**

Emeritus Professor Christian Amatore, 69, was educated at Ecole Normale Supérieure (ENS-Paris, France), the highest French center for higher education and research. He entered CNRS at 23 and obtained his Doctorat d'Etat cum Laude in 1979. He then moved to Indiana University at Bloomington where he was appointed as a CNRS-NSF Visiting Assistant Professor.

He returned to France in 1984 as Director of Research in CNRS and founded his laboratory back in ENS. In 1999, he was elected on the former position of Louis Pasteur and performed 7 years as Dean of the Chemistry Department, designing and implementing the present configuration of the ENS Chemistry Department. During his mandate, he founded the Doctoral School (ED388) of Central Paris in Physical and Analytical Sciences and created the first Institute for Chemical Analytical Sciences in France, hosted in the Greater Paris.

He was elected as a corresponding member (1996) and then as Full Member (2002) of the French Academy of Sciences. He published more than 500 primary research papers that gathered more than 26 000 citations with a h-index of 83.

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## **Past and current positions**

French Professorships:

- (1974-1975) Research assistant, Department of Chemistry, Ecole Normale Supérieure (ENS),
- (1975-1984) CNRS Assistant Professor (CR2, then CR1), CNRS and Paris 7 University,
- (1984-1990) CNRS Full Professor (DR2) at ENS,
- (1990-2000) CNRS Full Professor (DR1) the DRCE1 at CNRS and ENS,
- (2001-2007) Full Professor of exceptional and highest exceptional rank (former Louis Pasteur's position), Pierre et Marie Curie University (UPMC) and ENS,
- (2007-present) CNRS Full Professor then emeritus Professor of the highest exceptional rank at ENS, PSL and Sorbonne University.
- Foreign Professorships:
  - (1982-1983) Visiting Assistant Professor (CNRS-NSF), Indiana University, Bloomington, USA,
  - (1993) Visiting Professor, Department of Chemistry, University of Modena (Italy),

- (1996) Visiting Professor, Department of Chemistry, University of Padova (Italy),
- (1997) JSPS Professor, Japan,
- (2002) Professor, Department of Chemistry, East Normal China University, Shanghai (China),
- (2009-2017) Professor, then (2017-present) Distinguished Visiting Scientist, Xiamen University, Xiamen (China).

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#### **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

He was Chairman of the FAS chemistry section (2005-2010), and then elected (2011-2015) to a responsibility equivalent to that of a FAS vice-President to be in charge of Education and Advanced Training in relation with IAP.

Presently he is Ordinary Member (restricted core) of the FAS Committee for the Developing Countries (COPED) where he has essentially focused on Sub-Saharan issues.

As an active COPED member he contributed to organize four Franco-African meetings (twice in Dakar, Senegal; Cotonou, Benin; Brazzaville, Republic of the Congo) gathering selected University Professors from French-speaking and English-speaking African countries to elaborate and implement strategies for high schools, higher education and universities. Master and Ph.D. students were also invited to present their research works through short oral and poster communications. Each meeting led to publication of acts and a fraction of presented researches were published in the FAS journal.

In Brazzaville, Christian Amatore proposed the creation of a Central Sub-Saharan Analytical center for training technicians and engineers and certificating locally produced goods for local use and exportation that was considered as an important priority for Sub-Saharan Africa.

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#### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

The mission of ISC is to act as the global voice for science. In a period where global changes are accelerating, temperature increases being coupled to increasingly frequent and intense extreme events, mankind has to adapt and become able to formulate and implement solutions.

With more of 40 years of a brilliant career, fully recognised in France and worldwide by his election to five national Academies of Sciences and several foreign professorships, the nominee has an indisputable expertise in his scientific domain.

His domain lies at the frontier of Physics and Chemistry, with two highly important aspects for the mission of ISC being electrochemistry and analytical chemistry.

Analytical Chemistry is one of the major tools for measuring these changes and provide solutions for

improving human health and for evidencing and fixing environmental issues. All populations worldwide and Heads of States should have a background in this domain to be able to understand the problems.

Through his active role as a member the Committee for the Developing Countries (COPED) where he has essentially focused on Sub-Saharan issues, the nominee will be able to play an essential role in allowing these countries to address challenges in agriculture, climate, health and energy.

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### **Experience in scientific, academic and other relevant organizations**

The nominee has a high experience in counseling national and international academic and scientific organizations for improving scientific matters: While FAS vice-President for Education, he participated weekly to the FAS Core Board that plans and implement strategies that are voted later by FAS members.

In 2000 he coordinated the FAS Science and Technology Report “Analytical Chemistry: Science and Society” convened by the French government to restore analytical chemistry in French universities.

Under Presidents Chirac and Sarkozy he sat among the 20 members of the High Council for Science and Technology created by President Chirac to directly advise the President of the French Republic.

He was elected Vice-President (4 years) then President (2-year President Elect, 2-year President in Charge, 2-year Past-President) of the International Society for Electrochemistry (ISE) which gathers electrochemists worldwide. Under his 10-year mandates ISE membership quadrupled.

He sat as member (2011-2013) and then President (2015-2017) of the Jury of the Prize L’Oréal-UNESCO “For Women in Science”.

He sits in the IUPAC College of Experts for analytical electrochemistry and micro/nanoscience since 2004. Since 2005 he is part of the Board of Directors of the International Foundation of the Maison de la Chimie.

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### **Why is the nominee particularly suited to hold the proposed position?**

Beyond his undisputable scientific renown, the nominee has already demonstrated a number of major qualities to effectively exercise the role of member of ISC Governing Board:

- very high level of scientific competence in an essential niche for sustainable development
- Many relations in French and foreign Universities and Academies of Sciences, and with IUPAC, TWAS, IAP.
- Experience in interacting at the highest political levels, when sitting among the 20 members of the High Council for Science and Technology for directly advising and counsel the President



of the French Republic, or in preparing scientific advices submitted by IAP to G7 & G20 states meetings

- Marked interest for defending the free and responsible practice of science, with a special attention to women (he sat as a member and then as President in the L'Oréal UNESCO Jury for Women in Sciences) and to scientists from African countries.
- Christian Amatore will undoubtedly be very beneficial to the missions of ISC and its Board for assessing the needs and duties of science in the world and promoting their importance.

**Karina Batthyány**

*Executive Secretary, Latin American Council of Social Sciences (CLACSO)*



Nominator: **Latin American Council of Social Sciences (CLACSO)**

Nationality: **Uruguayan**

Country of residence: **Uruguay**

Discipline: **Sociology**

Born in: **1968**

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**Motivational statement**

*“The merger of ICSU and ISSC raised my interest several years ago as a much needed international strategy facing global science challenges.*

*The possibility of contributing myself in ISC governing board, from a developing region social sciences perspective, was an idea originated by my involvement in supervising CLACSO’s contributions in several ISC programs and initiatives. I realized that the positive results of my years dedicated to CLACSO, of which one in pandemic, as Executive Secretary of CLACSO’s network, showing a growth in the number of associated research institutes, today 780 in 52 countries of 5 regions, growth in the today more than 4.000 researchers participating in CLACSO’s 100 research working groups on priority issues, and also growth in that period in the number of participants (students, researchers, policy makers and social actors other than the academia) attending CLACSO’s online training activities, and the exponential growth of users of CLACSO’s networks and platforms, were all results that constitute a sound foundation for me to dream of helping ISC governing board work towards its future challenges.*

*As member of CLACSO’s Steering Committee (2015-2018), I have experience in contributing to governing board in the strategic decisions and implementation of each year’s activities, which required regular travel, building partnerships, advocacy and active fundraising strategies. All skills required in this call for nominations to ISC governing board.*

*In times between pandemics, or in post-pandemic times, my profile as specialist on gender and care policies can bring new perspectives in strategic contributions of science to caring about our suffering people and depleted environment.*

*My personal situation, mid-life career, 52 years old, with two grown-up independent boys, and my*

*academic and professional responsibilities running smoothly, is a good moment to dedicate time, energy and creativity to contribute in ISC governing board, if I am elected.”*

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## **Academic background**

Ph.D. in Sociology, University of Versailles Saint Quentin Yvelines (France, 2000-2003) with scholarship from French government; Master in Regional and Local Development, Catholic University of Uruguay and CLAEH University-Latin American Center for Human Economy (Uruguay, 1997 – 1999); Specialization in Urban Sociology, University of the Republic, Uruguay (1995 – 1996); Degree in Sociology, University of the Republic, Uruguay (1987-1992). IDRC (Canada) scholarship on gender issues (1997-1999).

Since 1992, professor and researcher, Faculty of Social Sciences, University of the Republic (Uruguay). Professor of research methodology and gender sociology. She was coordinator of the Master in Sociology (2010-2017) and is currently coordinator of the Doctorate in Sociology at the University of the Republic (Uruguay). Member of the National Research System, level II in Uruguay. Winner of the Filgueira Fund from the Ministry of Social Development from Uruguay (2010). Author of invited presentations worldwide and more than 130 publications on issues of gender; public policies; unpaid work; politics of care in Latin America; recent evolutions of gender, state feminism and care models in Latin America and Europe; health, gender and poverty in Latin America; social analysis of the pandemic. Coordination of international research working groups on those issues.

[Link to CV](#)

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## **Past and current positions**

CLACSO's Executive Secretary since 2018 (more information below under the next question).

- University of the Republic (Uruguay), Faculty of Social Sciences, professor and researcher (1992-to date)
- National Research System in Uruguay, level II member (2005-to date)
- University of Barcelona, Spain. Visiting Professor and research, on Care and Social Welfare (2018).
- University College London. International Network on Leave Policies and Research, and Transforming Care Network. International academic committee (2017-to date).
- National Agency of Research and Innovation, Uruguay. Coordinator of the Care Policies Project (2015-2017).
- Office for Planning and Budget, Uruguay. Coordinator of the Gender Systems Agreement (2016).

- ECLAC-Economic Commission for Latin America. Coordinator Regional Project on Gender Issues (2010-2011). Consultant and teaching on Care Policies, Gender Policies, Public Policies on Equality (2010-to date).
- Ministry of Social Development, Uruguay. Development of the National Care System (2010-2011).
- FLACSO-Latin American Faculty of Social Sciences. Regional Program Public Policies on Gender PRIGEPP. Visiting Professor (2008-to date).
- UNFPA. National official for the program in Uruguay (2008-2010) and consultant (2005-2011).
- UNDP. Associate Regional Expert on gender issues (2010-2012).
- IDRC, Canada. Project Coordinator (2004-2005); Consultant on gender issues (2003-2004).
- Institute of the Third World, Uruguay (ngo). Coordinator Research Area (2003-2007)

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#### **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

CLACSO is the ISC member organization on behalf of which we are submitting this nomination.

The Latin American Council of Social Sciences (CLACSO) is an international non-governmental organization with associative status in UNESCO, created in 1967. Currently it brings together 780 research and postgraduate centers in the field of social sciences and humanities in 52 countries of Latin America and from other regions.

Karina Batthyány has been elected as Executive Secretary of CLACSO in CLACSO's General Assembly back in 2018. Her leadership gave priority to certain objectives:

- Promote and strengthen collaborative research on priority issues
- Build bridges between academia, research and public policies
- Support research and build capacity in less privileged countries
- Provide opportunities of research to young women, black and afro, rural, indigenous, young people from popular urban sectors
- Defend and deepen democratization of knowledge by making a strong emphasis on open science and open access
- Promote South-North and South-South dialogues from comparative perspectives
- Build situated research assessment criteria

She had previously been member of CLACSO's Steering Committee (2015 – 2018), is the coordinator of CLACSO's International Course on Care Politics with Gender Perspective (2019 – to date).

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## **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Karina Batthyány's experience in building partnerships for regional collaborative and participatory research on mission-oriented priorities, and its incidence on policies, gives her the needed background to contribute in ISC's high-level strategy to influence and engage members of the scientific and policy communities, the private sector and civil society in its work, and increase the impact of the ISC in global issues.

For ISC initiatives improving the international science community impact on issues of global interest, open science can make a difference, and Karina Batthyány's leadership in a regional research network in Latin America recognized for advancing science as a public good and high adoption of open access practices.

In these times of anticipated recurrent pandemics, her initiative of creating early in this pandemic the Social Observatory of Pandemics to interpret the phenomenon of the global pandemic, its social effects and warn about the new forms of inequality that can derive, initiative which has received already inputs from more than 350 specialists and institutions, puts her in a good position to contribute in strengthening ISC's alliances for innovative ways for science to contribute in better understanding and anticipating possible future scenarios and alternatives in these and other issues concerning sustainability.

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## **Experience in scientific, academic and other relevant organizations**

In addition to other replies –

Coordination of research programs:

- The Invisible Bases of Social Well-being: Gender, Unpaid Work, and Home Care”, University of the Republic, Uruguay (2015- to date).
- Policies of Care in Uruguay: Impact on Gender Relations (2015-to date).
- Strengthening Gender Perspective in the ‘Uruguay Grows with You’ Program, Office of Planning and Budget, Uruguay (2014-2015).
- Unpaid Health Care: The Contribution of Families and Women to the Uruguayan Health System”, University of the Republic (2013-2015).

Member evaluation committees, individual evaluator, of research projects, research programs, research results, and research publications

Awards:

- Fondo Carlos Filgueira (2010)

- MIDES-UNDP Fondo Nacional de Investigadores, Research Trajectory 2002-2004 (2005) CONICYT

Working groups coordinator:

- Social Inequalities IV Encuentro Latinoamericano de Metodología (ELMECS), Costa Rica, 2014
- Gender Sociology – Asociación Latinoamericana de Sociología. 2011 (to date)
- Sociology and Gender – I,II y III Congreso Uruguayo de Sociología, Montevideo, 2011, 2013, 2015
- Social Inequalities – III Encuentro Latinoamericano de Metodología (ELMECS), Colombia, 2012

Member organizing committee: II Congreso Uruguayo de Sociología, Montevideo, 2013.

Coordinator of Diploma on Gender and Public Policies, University of the Republic, Uruguay (2010-2012 y 2015- 2017)

### **Why is the nominee particularly suited to hold the proposed position?**

Considering Karina Batthyány's experience in CLACSO's collaborative science planning activities, its financial requirements and administration in this international network of 780 research centers in 52 countries, her capacity for building consensus within the Steering Committee and with partner organizations, her fundraising activities, and her introduction of innovative use of outreach and engagement digital communications in CLACSO to reach diverse audiences, all makes her particularly suited to contribute in ISC governing board to design strategies and action plans for ISC global and regional science initiatives, its outreach strategies and agendas. Also her previous experience, described in answers to other questions in this form, provides her with the needed expertise to take active roles in ISC governance, relationship management and programme activities. Her leadership of a global network of SSH research centres in these historical times in the world, gives her even more relevance as a candidate promoting a plural, inclusive, tolerant and respectful vision of differences within a framework of commitment to social justice, equality and democracy.

In times of much needed opportunities for gender equality in science, Karina Batthyány would bring to the ISC governing board her longstanding experience on advocacy, research and incidence on policies on gender issues.

## Françoise Baylis

University Research Professor, Dalhousie University



Nominator: **National Research Council Canada (NRC) and Social Sciences, Humanities Research Council Canada (SSHRC)**

Nationality: **Canadian, British**

Country of residence: **Canada**

Discipline: **Bioethics, philosophy**

Born in: **1961**

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### Motivational statement

*"I am a philosopher by training and I have a specialization in bioethics. It is a paradox that bioethicists are often viewed as either standing in the way of scientific progress or as uncritical cheerleaders for science. My work aims to dispel these unfortunate (but sometimes accurate) caricatures.*

*I have published and presented widely on the need to: (i) pursue meaningful interdisciplinary research, (ii) improve scientific and ethics literacy, (iii) promote evidence-informed decision-making, and (iv) contribute to meaningful public education, engagement and empowerment in pursuit of socially just science policy. These commitments align well with the priorities of the ISC and I relish the opportunity to continue to pursue this work on the international stage.*

*My academic career has always included public service, and I have sought to instill the importance of this in my graduate and post-graduate students. My personal mantra is "To make the powerful care". The knowledge produced in public academic settings and research institutes belongs to all and it is imperative that we find effective ways and means to share this knowledge broadly and thereby to promote human flourishing. This perspective informs all of my advocacy work in support of scientifically robust and ethically sound policy. I am a frequent media commentator, contributing to commentaries, blogs and news articles for the general public with a view to increasing both science literacy and ethics literacy.*

*I am deeply motivated to join the Governing Board of the ISC to continue this advocacy work with like-minded colleagues whom I presume are equally interested in and committed to prioritizing and supporting (i) responsible stewardship of science, (ii) responsible stewardship of research resources, and (iii) responsible regulatory stewardship."*



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## Academic background

Françoise Baylis is University Research Professor at Dalhousie University. Prior to this, she was the Tier 1 Canada Research Chair in Bioethics and Philosophy for 14 years.

She is a member of the Order of Canada and the Order of Nova Scotia, a Fellow of the Royal Society of Canada and the Canadian Academy of Health Sciences. In 2017, she was awarded the Canadian Bioethics Society Lifetime Achievement Award. In 2020, she earned the PROSE Award in Clinical Medicine for her book *Altered Inheritance: CRISPR and the Ethics of Human Genome Editing*. She was also awarded the McDonald-Merrill-Ketcham Memorial Lectureship and Award for Excellence in Law and Medicine, Indiana University School of Medicine. She is a member of the WHO Expert Advisory Committee on Developing Global Standards for Governance and Oversight of Human Genome Editing.

Baylis is a philosopher whose innovative work in bioethics, at the intersection of policy and practice, has stretched the boundaries of the field. Her work challenges readers to think broadly and deeply about the direction of health, science and biotechnology. It aims to move the limits of mainstream bioethics and develop more effective ways to understand and tackle public policy challenges in Canada and abroad.

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## Past and current positions

Dalhousie University 1996-present

- University Research Professor, 2018-2022
- Professor and Canada Research Chair in Bioethics and Philosophy, Faculty of Medicine, 2004-2018
- Professor, Department of Bioethics, Faculty of Medicine, 2002-2004
- Acting Department Head, Department of Bioethics, Faculty of Medicine, 2000-2001
- Associate Professor, Department of Bioethics, Faculty of Medicine, 1999-2002
- Associate Professor, Office of Bioethics Education and Research, Faculty of Medicine, 1996-1999

Arizona State University 2010-2019: Adjunct Professor, Centre for Biology and Society

Université de Montréal 2014-2019: Collaboratrice hors-Québec du Centre de Recherche en Éthique

University of Tennessee, Knoxville 1993-1996: Assistant Professor, Department of Philosophy

Hospital for Sick Children, Toronto 1991-1993

- Bioethicist, Department of Bioethics

- Lecturer, Departments of Pediatrics, Obstetrics and Gynaecology, and Rehabilitation Medicine

Westminster Institute for Ethics and Human Values, London, Ontario 1989-1990: Research Associate

#### Visiting Fellowships

- Wayne Morse Chair of Law and Politics, University of Oregon, 2020-2021
- Visiting Researcher, Brocher Foundation, Geneva, Switzerland, October 2015
- Visiting Scholar, Bioethics Centre, University of Otago, Dunedin, New Zealand, 2011
- Visiting Professor, Centre for Biomedicine and Society, School of Social Science & Public Policy, King's College London, 2009-2012
- Visiting Researcher, Brocher Foundation, Geneva, Switzerland, July 2008
- Visiting Fellow, Centre de Recherche en Ethique de l'Université de Montréal, 2003-2004

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#### **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

Françoise Baylis is a long-standing contributor to scientific research and excellence in Canada and around the globe. She was awarded the Order of Canada for outstanding contributions in her field, and she holds Fellowships to the Royal Society of Canada and the Canadian Academy of Health Sciences. Notably, Baylis also held the position of Tier 1 Canada Research Chair in Bioethics and Philosophy for 14 years, a position which is in part supported by the Social Sciences and Humanities Research Council (SSHRC) and works to strengthen Canada's international competitiveness, and help train the next generation of highly skilled people through student supervision, teaching, and the coordination of other researchers' work.

The National Research Council of Canada (NRC) and SSHRC have both supported Professor Baylis's work through a number of research grants on topics such as Bioethics and Health Law; Brain Matters: New Directions in Neuroethics; and Feminist Health Care Ethics. Professor Baylis was involved in the Biotechnology Program review at the NRC in 2001 and sat on a number of panels and committees for SSHRC such as the 2007 Philosophy Committee of the Grants Panel and the National Advisory Committee on Health Activities in 1999.

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#### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Françoise Baylis is deeply committed to the ISC vision of science as a global public good. The general domain of Science in Policy and Public Discourse in the ISC Action Plan for 2019-21 aligns with her areas of expertise and positions her well to contribute to the Governing Board while also supporting the ISC Committees on Outreach and Engagement Committee and Freedom and Responsibility in

Science. She is currently a member of the Royal Society of Canada Committee on Public Engagement and International Affairs.

Baylis has a distinguished international reputation and would bring a strong work ethic and enthusiasm to the ISC. Her current work focuses on heritable human genome editing. She is a member of the WHO Expert Advisory Committee on Developing Global Standards for Governance and Oversight of Human Genome Editing and a member of the WHO Working Group on Principles of the Global Guidance Framework for the Responsible Use of the Life Sciences. Recently she was named a member of the Planning Committee for the Third International Summit on Human Genome Editing to be held in London England in March, 2022. These accomplishments make her particularly well-suited for a role with the ISC.

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### **Experience in scientific, academic and other relevant organizations**

#### Select International Committees (Member)

- WHO Working Group on Principles of the Global Guidance Framework for the Responsible Use of the Life Sciences, 2021
- WHO Expert Advisory Committee on Developing Global Standards for Governance and Oversight of Human Genome Editing, Geneva, 2019-2021
- Board of Directors, International Association of Bioethics, 2017-2020
- Global Forum on Bioethics Research, Planning Committee Ethical Issues of Research in Pregnancy Buenos Aires, 3-4 November 2016
- US National Academy of Sciences, US National Academy of Medicine, Chinese Academy of Sciences and the UK's Royal Society Planning Committee International Summit on Human Gene Editing, Washington, 1-3 December 2015

#### Governor-in-Council Appointments

- Assisted Human Reproduction Canada (AHRC), Board of Directors, 2006-2010
- Canadian Institutes of Health Research (CIHR), Governing Council, 2001-2004
- Canadian Biotechnology Advisory Committee (CBAC), 1999-2001

#### Select National Committees

- Royal Society of Canada, Committee on Public Engagement (Member), 2020-2023
- Royal Society of Canada, Academy I, (Academic Secretary, Member of Council), 2012-2015
- Royal Society of Canada, Atlantic Steering Committee (Chair), 2012-2015
- Canadian Institutes of Health Research (CIHR), Gender & Health Institute Advisory Board, (Member), 2009-2014

- Canadian Commission for UNESCO, Sectoral Commission, Natural, Social and Human Sciences, (Member), 2008-2017
  - Canadian Centre for Ethics in Sport (CCES), Board of Directors, (Member), 2006-2015
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### **Why is the nominee particularly suited to hold the proposed position?**

Françoise Baylis has over 30 years experience working at the interface of science and policy.

She has contributed profoundly to the academic literature in her area of expertise, including writing about the roles of scientists in policymaking as pure scientists, science analysts, science issue advocates, and science diplomats. She is deeply committed to national and international collaborations as is evidenced through her service on committees, most recently, the WHO Expert Advisory Committee on Developing Global Standards for Governance and Oversight of Human Genome Editing, and the Governing Council for the Canadian Institutes of Health Research. She is called upon regularly as an expert, including to give testimony in Supreme Court of Canada proceedings and she is a strong advocate on issues such as academic freedom, and the importance of public education, engagement and empowerment.

Baylis not only has relevant background knowledge and skills, but also a range of character traits that would allow her to serve the ISC well as a member of the ISC Board. She is a person of integrity and courage who is not afraid to tackle difficult issues, habitually working to build consensus in a collaborative collegial manner to advance science as a global public good.

## Geoffrey Boulton

Regius Professor of Geology Emeritus, University of Edinburgh



Nominator: **International Union of Quaternary Research (INQUA)**

Nationality: **British**

Country of residence: **United Kingdom**

Discipline: **Geology**

Born in: **1940**

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### Motivational statement

*"I am convinced that to be the global voice for science is the right role for ISC, and that it is increasingly learning how best to articulate that voice. It must continue, including through increased dialogue with its members, to establish the issues that it should take up, and create the links with the international bodies, such as the UN, through which these issues are best promoted globally. There have been significant advances in these latter processes. I have been involved in such initiatives including with UNEP on international environmental data, with UNESCO on Open Science, with actions to reform scientific publishing, and to advise WMO, UNDRR and governments on long term scenarios for Covid-19. It is important that ISC creates pathways to influence with such bodies in ways that enable its members to contribute more effectively to the global public good, and crucial that it is globally inclusive in its concerns. I am strongly of the view that the Governing Board should be an active, working Board. I have been active on ISC matters during the last period, and would continue to be so if elected."*

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### Academic background

BSc, PhD and DSc in Geology from the University of Birmingham. Research primarily in the fields of glaciology and glacial geology. Fellow of the Royal Society and of the Royal Society of Edinburgh (Scotland's national academy). Honorary Life Fellow of the International Union for Quaternary Research. Awards for science include the Kirk Bryan Award of the Geological Society of America, Seligman Crystal of the International Glaciological Society, Lyell Medal of the Geological Society, Founders Medal of the Royal Geographical Society, Croll Medal of the Quaternary Research Association, UK Polar Medal, Commandeur de de l'Ordre des Palmes Academiques by the French Government, and honorary degrees from the Universities of Heidelberg, Chalmers (Sweden), Birmingham and Keele.

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### **Past and current positions**

- Metal Box Company – 1962
- Geological Survey of Great Britain 1963-64
- Demonstrator in Geology, University of Keele 1964-65
- Research Fellow in Geology, University of Birmingham 1965-68
- Hydrogeologist – Kenya Department of Water Supply 1968
- Lecturer/Reader, School of Environmental Sciences, University of East Anglia 1969-80
- Professor of Geoscience, University of Amsterdam 1980-86
- Regius Professor of Geology, University of Edinburgh (sequentially Head of Geology and Geophysics – Provost and Dean of Science and Engineering – Vice Principal of the University) 1986-2008
- Regius Professor Emeritus 2008-

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### **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

The nominee was active within INQUA for many years. He was leader of the UK delegation for a period of 8 years and is an INQUA Honorary Fellow.

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### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

The nominee is first of all an excellent scientist in Quaternary Research and well-known in that field and far beyond. In addition, he served the university community as director at various levels and hence, he has very good knowledge of universities and the institutions of science. Based on that knowledge he advised other (foreign) universities and governments. He also contributed to the debate on science policy in Africa, Latin America, Asia.

Also worth mentioning is that the nominee contributed substantially to ISC during his first term

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### **Experience in scientific, academic and other relevant organizations**

- Member of the UK standing Royal Commission on Environmental Pollution
- Member of the UK Prime Minister's Council for Science and Technology
- Member of the Scottish Government Science Advisory Committee

- Member of the UK Natural Environment Research Council
  - Member of the Funding Council for the Scottish Universities
  - President of the Quaternary Research Association
  - Chair of the Research Committee of the League of European Research Universities (LERU)
  - General Secretary of the Royal Society of Edinburgh
  - Member of Council of the Royal Society & Chair of its Science Policy Centre
  - President of the Scottish Association for Marine Science
  - President of CODATA
  - Chair of the Academic Advisory Council, Heidelberg University (current)
  - Member of the Strategic Council of the University of Geneva (current)
  - Member of the Advisory Council of the African Open Science Platform (current)
  - Member of the Governing Board of ISC (current)
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### **Why is the nominee particularly suited to hold the proposed position?**

The nominee is an active researcher with projects in Iceland and Antarctica. However, more relevant is his experience in policy and in bodies of high relevance to the work of ISC.

To be mentioned is his work on the current ISC Governing Board:

- Major author for the 2019-2021 and the 2021-2024 Action Plans
- Author of ISC Open Science report and its work with UNESCO on its recommendation on Open Science.
- Leads ISC's current project on Scientific Publishing
- Principal author of its related recent report on "Opening the Record of Science: making scholarly publishing work for science in the digital era"
- Vice Chair of ISC's Committee on Science Policy.



## Melody Burkins

Director of the Institute of Arctic Studies, Associate Director in the John Sloan Dickey Center for International Understanding, and Adjunct Professor of Environmental Studies at Dartmouth College



Nominator: **U.S. National Academy of Sciences**

Nationality: **U.S. American**

Country of residence: **U.S.A.**

Discipline: **Geology, ecosystem studies**

Born in: **1968**

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### Motivational statement

*“Since my 2018 election to the founding ISC Governing Board, I have been truly honored to serve its membership and help to build the organization, contributing to its first Action Plan and serving as Vice Chair of the Committee on Outreach and Engagement. Looking back, it is hard to believe it has only been three years. In that time, and in close partnership with members around the world, we have created a unique, innovative, and transformational science organization that serves not only as the global voice of science, but has a clear mission to advance science as a global public good. Each year, we have prioritized investments in our global ISC membership, listening deeply to create a first ISC Action Plan and working with members to launch new online platforms that facilitate connection, engagement, and knowledge sharing. We have also created new spaces for global science dialog and action at the regional, national, and international scales, constantly strengthening historic partnerships and creating new allies around the world. And we have found powerful global champions, our ISC Patrons, whose voices transcend science as thought-leaders across social, economic, and cultural spaces. We have done this important work in person, then virtually as COVID-19 changed all of our lives.*

*If elected, I would be honored to serve a second term on the International Science Council Governing Board. I believe strongly in our vision and mission and, though I am not one to look back, I will have the knowledge and experience of working through our foundational, first three-year term to share with others if and when appropriate. The global pandemic is still with us, and we still must address a climate emergency, work towards sustainable development, harness the power of new technologies, and continue the hard work of combating systemic racism and bias. In short, the work of the ISC – the global voice of science – is needed more than ever. The ISC continues to be positioned as a powerful force for the advancement of global science, science cooperation, and the transformation of science system, at a time when our world needs it most.”*

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## **Academic background**

Dr. Burkins earned her B.S. in geology at Yale University, and both her M.S. and Ph.D. at Dartmouth College, focusing her doctoral studies on earth and ecosystem studies in the Antarctic Dry Valleys.

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## **Past and current positions**

Dr. Burkins is the Associate Director for Programs and Research in the John Sloan Dickey Center for International Understanding, Senior Fellow in the UArctic Institute of Arctic Policy, and Adjunct Professor of Environmental Studies at Dartmouth.

After receiving her Ph.D. from Dartmouth and serving as a Visiting Assistant Professor in Dartmouth's Environmental Studies program in 1998, Burkins was awarded a prestigious 1999-2000 AAAS Congressional Science and Technology Policy Fellowship sponsored by the U.S. Geological Survey (USGS) and Geological Society of America (GSA). She worked briefly as a AAAS Fellow before being asked to serve as the formal energy and environment policy advisor to U.S. Senator Patrick Leahy in Washington, D.C., a position in which she served through 2002.

Dr. Burkins then spent over a decade at the University of Vermont (UVM) in a several leadership and management roles, including director of the Northeastern States Research Cooperative, executive director of the Vermont Monitoring Cooperative, associate dean in the College of Engineering and Mathematical Sciences, director of federal relations, interim director of the UVM supercomputing facility, and senior director for research and strategic initiatives with the Vice President for Research and Dean of the Graduate College.

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## **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

Dr. Burkins is an elected member of the founding Governing Board of the International Science Council (ISC); Chair of the U.S. National Academy of Sciences' Board on International Scientific Organizations that has responsibility for the ISC and many of its member unions); and Past Chair of the U.S. National Committee for Geological Sciences. She has been a member of several NAS-appointed U.S. delegations to General Assemblies of the ISC and the International Union of Geological Sciences (IUGS).

She is an appointed member of the Advisory Board of the United Nations' Office of Disaster Risk Reduction (UNDRR) as well as the 15-Member UNESCO Global Independent Expert Group on Universities and the 2030 Agenda (EGU2030). She also serves on an advisory board to the Science Diplomacy Division of the International Network of Government Science Advisors (INGSA).

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## **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Dr. Burkins is an advocate for policy-engaged scholarship across disciplines, experiential education, and the support of science and diplomacy initiatives advancing sustainability, inclusion, equality, and peace in the Arctic and globally. Her areas of expertise complement areas of ISC emphasis, including earth and environmental systems; Arctic science; the Sustainable Development Goals (SDGs); science policy and diplomacy; strategic planning and partnerships; international education; women's leadership, and gender inclusion.

Dr. Burkins was elected to the founding ISC Governing Board in 2018 after serving on the Strategy Working Group for the successful ICSU-ISSC merger. She helped develop the first ISC Action Plan and is the Vice-Chair of the ISC Committee on Outreach and Engagement. In addition to serving as an ISC member of the UN committees listed above (UNDRR-GAR, UNESCO EGU2030), she has recently served on the Editorial Oversight Committee to the ISC-Nature Diversity Podcasts and in advisory roles to the Missions for Science Report to the Global Forum of Funders and the Global Risks Perception Report with Future Earth.

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## **Experience in scientific, academic and other relevant organizations**

Born and raised in Fairbanks, Alaska, Dr. Burkins also maintains strong personal and professional connections to the Arctic and cares deeply about the future of the region, its communities and its landscapes. In leadership of the Institute of Arctic Studies at Dartmouth, she serves as a formal delegate to the UArctic Assembly and was recently appointed UArctic Special Advisor, working with global partners to center the inclusive, coproduction of knowledge with Arctic Indigenous Peoples in the next International Polar Year. She serves as Vice Lead of the UArctic Model Arctic Council Thematic Network and is a founding member of the UArctic Gender in Arctic Knowledge Production Thematic Network. At Dartmouth, she advises the student group, Aurora, an organization celebrating Alaskan culture and connecting students to future opportunities in the North. Dr. Burkins worked with Canadian and Alaskan colleagues to host the first Arctic Science Diplomacy and Leadership Workshop at Dartmouth in 2017 and is invited to speak on issues of Arctic science diplomacy, gender equity and inclusion, and the training of next generation leaders in global venues from Finland to Oman.

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## **Why is the nominee particularly suited to hold the proposed position?**

With over twenty-five years of experience in both academia and government, Dr. Burkins is an advocate for policy-engaged scholarship across disciplines, international education and partnerships, creating new opportunities for academics and professionals in science policy and diplomacy, and the support of global initiatives investing in earth systems sustainability, civic engagement, and gender equality. She has a longstanding interest in working with international and multidisciplinary (transdisciplinary) organizations engaged with global challenges. Dr. Burkins has a particular interest in working with Indigenous populations, knowledge coproduction, and in strengthening opportunities for underrepresented communities, early career researchers, and women in science. She

is dedicated to ensuring the most robust, inclusive and ethical knowledge is applied to pressing global challenges, from climate change to poverty alleviation. Her understanding of the science and policy communities, her commitment to the organizations with which she is engaged, and her science diplomacy skills would make her a continuing asset to the ISC.

## Mei-Hung Chiu

*Distinguished Professor of Science Education, National Taiwan Normal University*



Nominator: **International Union of Pure and Applied Chemistry (IUPAC)**

Nationality: **Chinese: Taipei**

Country of residence: **China: Taipei**

Discipline: **Chemistry, science education**

Born in: **1957**

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### Motivational statement

*“Being a member of IUPAC for more than 20 years, I had the privilege to lead the IUPAC Committee on Chemistry Education as the chair (2012-15), was elected as the Bureau member of IUPAC for two terms (2016-2023), and serve as a member of the Executive Committee (2016-2023). Several missions are designated to be fulfilled while serving on the board, such as conducting outreach programs and promoting women and girls in STEM fields. I was also elected as the International Coordinator (2008-2010) of National Association for Research in Science Teaching (based in the USA, the largest science education research organization in the world). During my tenure as international coordinator, I initiated the Linking Science Educators Program to promote science education in emerging countries (such as Malawi in 2008, Nigeria in 2009, and South Africa in 2010).*

*If elected, I will work closely with the ISC members to contribute to the community in the following directions. First, I will enhance the communication among scientists, science education experts, school teachers, informal science education practitioners, and policy makers so as to maximize the impact of science education on research, practice, and policy. Second, I will disseminate educational research and good practices (Quality Education, SDG #4) of ISC to different countries to move ISC forward to meet its internationalization mission. Third, I will highlight the diverse issues relating to globalization, race, gender (Gender Equality, SDG #5), culture, and socioeconomics in science education research and practice. This is to ensure that high quality science education literacy can be cultivated among the next generations, to prepare them for the challenges of the 21st century. Along this line, I will extend ISC’s relationships with other scientific and educational organizations to collaborate on sustaining science education and promoting sustainable development for making a better world for future citizens.”*

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## Academic background

Mei-Hung Chiu is a Distinguished Professor of Science Education at the Graduate Institute of Science Education (GISE) of the National Taiwan Normal University (NTNU). She has a BS in chemistry (NTNU), Ed.M. and Ed.D. from Harvard University. She has published more than 100 articles about chemistry curriculum, students' conceptual understanding and changes, gender gap in STEM education, systems thinking, and modelling-based instruction in science learning in international and national well-known journals, such as Journal of Research in Science Teaching (JRST, top journal in science education), Science Education, International Journal of Science Education, International Journal of Science and Mathematics Education (SSCI), British Journal of Educational Technology, Chemical Education Theory and Practice (SSCI), Journal of Chemical Education (ACS official journal). She also co-edited or edited four books, including Celebrating the 100th Anniversary of Madame Marie Sklodowska Curie's Nobel Prize in Chemistry in 2012; Chemical Education and Sustainability in the Global Age published in 2013. She was a recipient of the Distinguished Contribution to Chemical Education Award from the Federation of Asian Chemical Societies in 2009; the Distinguished Contribution to Science Education Award from Eastern-Asian Science Education Association in 2016; and the 2021 IUPAC Distinguished Women in Chemistry or Chemical Engineer Award.

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## Past and current positions

Prof. Chiu has served as a volunteer to international scientific organizations for promoting science education, in particular, for chemistry education. She was the chair of the IUPAC's Biennial International Conference on Chemical Education in Taiwan (2010), Chair of Committee on Chemistry Education of IUPAC (2012-2015), Titular member of Committee of Chemistry Education (2008-2011, 2016-17), elected member of Bureau and member of Executive Committee (2016-2023) of IUPAC. She was the Project Director of Asian Chemical Education Network of Federation of Asian Chemical Societies. She served as International Coordinator (2008-2010) and President of the National Association for Research in Science Teaching (NARST based in the USA, 2016-2017; the first president from a non-English speaking country). She was the Founder and Editor-in-Chief of Chemistry Education in Taiwan since 2014. There have been 15 million visits to the official website of the CET since May 4, 2014. She serves as the Chair of Committee on Chemistry Education of Chemical Society Located in Taipei since 2010. She was the chair of GISE of NTNU from 1996-2002. Finally, she was the Project Overseer for Asia-Pacific Economic Cooperation's project on promoting scientific literacy for future citizenship (2018-2019) and for promoting women and girls in STEM+ (2019-2021).

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## Affiliation to and/or current/past/future role within the nominating ISC Member organization

Prof. Chiu has been actively involved in IUPAC activities and playing important roles to the organization. She participated in the ISC granted project titled A Global Approach to the Gender Gap in Mathematical and Natural Sciences: How to measure it, how to reduce it? as the second lead of the project (first lead was Marie-Francoise Roy of International Mathematics Union) on behalf of IUPAC from 2017-2019. This joint project involves: IMU (lead 1), IUPAC (lead 2), IUPAP, IAU, and IUBS as



supporting Unions and another six non-profit organizations to collaborate on the global survey, a joint study on publication patterns, and a collection of good practices. There were several products of the project, such as publications in journals and international presentations (e.g., the USA National Academies Webinar in 2020). After the project was completed in 2020, a new committee was formed, Standing Committee for Gender Equality in Science (SCGES), Dr. Chiu was nominated to be the representative on behalf of IUPAC. She also co-chairs a project with Mark Cesa, a former IUPAC President, entitled The Gender Gap in Chemistry-Building on the ISC Gender Gap Project, to continue the efforts on promoting women and girls in STEM field.

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### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Prof. Chiu is nominated as an ordinary member of the ISC Governing Board. She has been keen to champion the emerging and current issue in science and actively takes part in several educational initiatives as an initiator or a partner for promoting public understanding of chemistry as well as women and girls in STEM fields both domestically and globally. She was a key partner of a project titled Young Ambassadors for Chemistry (YAC), led by Lidia Schoen from the Netherlands, to train teachers around the globe to help students understand the benefits of chemistry since 2004. The organizers need to be flexible and creative to deal with local resources and teachers in classrooms, in particular, local colleagues' willingness to change. Dr. Chiu experienced various situations and overcame the challenges that arose to realise successful events with her partners. The goals of these educational outreach projects are to strengthen human capacity of improving living quality and promoting equality for next generations, which are aligned with the missions and visions of ISC. Dr. Chiu has visions, leadership, and knowledge of governing board and is capable to make her unique contribution to the organization.

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### **Experience in scientific, academic and other relevant organizations**

As a science education researcher, Prof. Chiu has been deeply devoted, in several academic and scientific organizations, to extend her impact on promoting scientific literacy worldwide. She takes immense pride in being part of these efforts. For instance, she was elected as the President of the NARST (2016-2017) (the first president from a non-English speaking country) to strengthen the interactions among researchers from different continents across the globe. She was the Associate Editor of Journal of Research in Science Teaching (the top notch journal in science education) from 2010 to 2014). She is also a member of the editorial board of Chemical Education Research and Practice (Royal Society of Chemistry, 2020- ), and a member of the editorial board of the Springer book series of Models and Modeling in Science Education.(2018- ). She has supervised 99 advisees to receive their degrees (17 in PhD & 82 in MS) (1992~ ). Dr. Chiu was the President of the Chinese Association for Science Education in Taiwan and served as a member of the Scientific Advisory Board of the Ministry of Education in Taiwan. Dr. Chiu's professional expertise and experiences have enabled her to contribute to science education.

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**Why is the nominee particularly suited to hold the proposed position?**

Prof. Chiu has been working with representatives from different scientific unions on the ISC project on global gender issues from 2017-2019 and she is also member of the Standing Committee for Gender Equality in Science (SCGES), as the representative of IUPAC, which includes 15 partners/unions. These activities provide her opportunities to interact with scientists and science educators from all over the world and allow her to develop leadership in the project. Dr. Chiu also serves as the chair of Committee on Chemistry Education of IUPAC. During her leadership as the chair, Dr. Chiu has encouraged researchers to collaborate on projects effectively and to produce constructive outcomes (such as journal articles). Large scale education programmes (LSEP) are still in operation in emerging countries to help science educators promote excellent quality of research and practice of science education in their unique sociocultural and sociopolitical contexts. The purpose of this program is to fulfil NARST's commitment to the improvement of science teaching and learning through research worldwide. Dr. Chiu's fruitful and profound experiences could aid in expanding the impact of ISC in this area.

## Steven Chown

Professor and Director, Monash University



Nominator: **Australian Academy of Science**

Nationality: **Australian, South African**

Country of residence: **Australia**

Discipline: **Entomology**

Born in: **1964**

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### Motivational statement

*"In the late 1980s I noticed among a shipment of fresh cabbages to an isolated, pristine sub-Antarctic island, many insect pest species potentially harmful to the local ecosystem. After making an argument based on the information at my disposal as a PhD student, the administrative leader of the island agreed to destroy all the cabbages and their pests (by fire). The team of tradespeople and scientists was displeased, but the evidence-based argument had been successful.*

*It was then I realised that sound evidence can serve good policy, but that it has to be well organised. And that time has to be spent organising that evidence, and delivering it clearly and effectively to policy-makers.*

*Since then, I have been involved in organising research, and researchers, to deliver work that relates to policy, and in converting that knowledge to forms that are policy-ready and capable of being influential. I led my first policy-related committee in 1996. And I have been involved in evidence-informed policy setting and the communication of research outcomes into policy, in domestic and international settings, ever since. I am convinced that for clear evidence to result in good policy, much effort must be harnessed, and harnessed from within the research community.*

*Society today finds itself in an extraordinary setting. The dismissal of expertise, which has been in the ascendance for much of the 21st century, via influential leaders and some sectors of society, is in retreat. The pandemic has rekindled conviction in the importance of evidence-founded policy and the institutions of civil society. Yet this reprieve is fragile. It has to be supported by constructive action demonstrating the value of evidence-informed policy and the research which underpins it. That requires strong institutions and individuals committed to them. The ISC is the lead among the former. Hence my interest, now."*

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## **Academic background**

Professor Chown obtained a PhD (1989) in biology from the University of Pretoria (South Africa), specialising in Entomology. His initial research was undertaken in South Africa, with long field spells in the Antarctic, and sabbaticals twice in the UK (once as a Commonwealth Staff Development Fellow) and once in New Zealand. In addition to his research on biodiversity, he developed strong capability in conservation and science policy. In 2012 he moved to Australia (Monash University), expanding his research to the Australia-Pacific, though maintaining a focus on the Antarctic and both conservation and science policy. His published research traverses all of these areas, and includes work on insect physiology (about which he co-wrote an OUP text), and medical-related research on insect vectors (tsetse and malaria mosquitos) and on the improvement of informal settlement environments. His academic activities include contributions to both science policy in Australia, South Africa and in an Antarctic context, and to conservation policy, especially in the Antarctic. He has received multiple awards for his work. Professor Chown is a Fellow of the Australian Academy of Science, a Fellow of the Royal Society of South Africa, and an international Honorary Member of the American Academy of Arts and Sciences.

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## **Past and current positions**

Professor Chown held an appointment in the South African Department of Environmental Affairs during his research for a PhD degree based on insects of the sub-Antarctic (1986-1989). His first academic position was as a lecturer (1989) in the Department of Entomology, University of Pretoria. By 1997 he had earned a Full Professorship in the same institution. He remained there, in the Department of Zoology & Entomology, until 2001. During that time he also held a Visiting Professorship at the University of Queensland over the period he spent on a research expedition to Heard Island. In 2001, he was directly recruited to a Full Professorship in Zoology at Stellenbosch University (South Africa) in 2001. In 2004 he was awarded, as inaugural Director, a National Research Centre of Excellence in Invasion Biology at Stellenbosch University. In 2012, he was directly recruited to revitalise the School of Biological Sciences at Monash University (Melbourne, Australia) as its Head, a position he held until 2017. In 2020, he was awarded, as inaugural Director, an Australian Research Council Special Research Initiative in Excellence in Antarctic Science. He is currently Professor of Biological Sciences and Director of this initiative, based at Monash University.

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## **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

Professor Chown is a Fellow of the Australian Academy of Science, elected for his outstanding contributions to Antarctic and biodiversity research. Between 2015 and 2021 he chaired the Australian Academy of Science's National Committee for Antarctic Research (NCAR). The NCAR represents Australian scientists from all scientific disciplines at a national level, ensuring that they can contribute to the scientific discourse nationally and to influence appropriate policy and policy implementation through the Academy's interaction with the parliament. Australia has a significant national Antarctic program involving hundreds of researchers across many disciplines. As NCAR Chair, Professor

Chown represented Australia as its Delegate to the Scientific Committee on Antarctic Research (SCAR) between 2016 and 2021. Professor Chown twice represented the Australian Academy of Science to formal inquiries of the Australian Senate about Antarctica and Australia's role there. As Chair of NCAR, he also represented the Academy's interests on the Australian Antarctic Science Council, contributing significantly to the most recent Australian Antarctic Science Strategic Plan, released in 2020.

Professor Chown understands deeply the intricate interactions between science and policy both nationally and globally. The Academy will gladly continue calling on his astute input and expert guidance to amplify science as a global public good.

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### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Professor Chown has much experience of the requirements of, processes underpinning, and bodies responsible for science policy. His most recent experience has been through the Presidency of SCAR, a body closely affiliated to the ISC, following its approach and principles. He has considerable experience in the way in which scientific evidence is best conveyed to inform policy making through his experience in the Antarctic Treaty setting, and through experience of science policy planning internationally and both in Australia and South Africa. His capability is widely acknowledged (e.g., the inaugural award of the prestigious Tinker-Muse Prize for Antarctic Science and Policy). In his areas of research he is considered a global leader, reflected by his election to the fellowships of learned academies in three countries, highly cited author status (cross-disciplinary, h-index 95), and regular appointment to participatory decision-making roles: in science advisory committees, journal editorial positions, and university leadership positions. He is deeply committed to advancing the role of science in society as evidenced by long-standing involvement in voluntary positions to do so. He has a history of very successful involvement in the governance of bodies which seek to promote the role of science as a means to advance our world.

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### **Experience in scientific, academic and other relevant organizations**

Professor Chown has considerable experience in science policy setting. In South Africa, he led the report (2004) to the South African Department of Science & Technology which formed the basis for the National Antarctic Strategy, and produced the science case for a new Antarctic research vessel (2007, the ship arrived in 2012). He was a member of the ICSU Committee (2003-2005) and a Board Member of the National Biodiversity Institute (2004-2006). In 1998, Professor Chown became South Africa's Alternate Delegate to SCAR, and was Delegate to SCAR by 2004, a position he held for several years. In 2006 he became SCAR's primary advisor to the Committee for Environmental Protection of the Antarctic Treaty, chairing SCAR's committee for Treaty interactions until 2014. In 2015 he was appointed chair of NCAR in Australia, assuming the role of Australian Delegate to SCAR in 2016. In the same year, he was elected President of SCAR, serving until April 2021. In 2020, he co-produced the most recent Australian Antarctic Science Strategy through his membership of the Australian Antarctic Science Council. Professor Chown has served on a wide range of science advisory bodies elsewhere, including in Europe, New Zealand, and the United Kingdom.

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**Why is the nominee particularly suited to hold the proposed position?**

Over many years Professor Chown has deftly navigated the complex science-policy landscape, making important and influential contributions to Antarctic science and research policy across multiple countries and internationally, including through his leadership of SCAR. He has worked closely with the Australian Academy of Science, which routinely draws on his expertise to develop domestic policy advice. As President of SCAR, Professor Chown's careful stewardship during the tumultuous pandemic period has ensured that SCAR maintains its global leadership role in research and scientifically-informed policy advice for Antarctica and the Southern Ocean.

With a proven track record and wealth of experience in science policy setting, Professor Chown is uniquely positioned to advance the ISC's mission by translating global frameworks into scientifically-informed actions and policy advice tailored to regional and national contexts.

Internationally recognised for his contributions Antarctic and biodiversity research, and with a long history of engagement and leadership of international scientific organisations, Professor Chown would be a highly visible and influential champion of the ISC's vision of science as a global public good, showcasing the integral role of scientific collaboration and cooperation across national borders in addressing pressing global challenges, including climate change, natural disasters, and sustainability and security.

## Pearl Dykstra

Full Professor, Erasmus University Rotterdam



Nominator: **Royal Netherlands Academy of Arts and Sciences**

Nationality: **Dutch**

Country of residence: **Netherlands**

Discipline: **Sociology**

Born in: **1956**

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### Motivational statement

*"It has been a privilege to serve on the ISC Governing Board for the past three years. The mission of the ISC is to be the global voice for science. If re-elected, I will continue to help the Council find that voice and to learn how best to use it. Being global implies tackling scientific issues that transcend national and regional boundaries. The complexity of such issues means they are best addressed by a multidisciplinary approach.*

*I bring extensive expertise in crossing disciplinary borders. As member of the group of Chief Scientific Advisors to the European Commission I have worked on topics such as food, biotech, cybersecurity, energy, pesticides, microplastics and covid. Scientific policy advising on these topics requires a thorough consideration of behavioural incentives, institutional path dependencies, power relations, etc. This kind of knowledge comes from the social sciences.*

*I also bring extensive expertise in going beyond national boundaries. Having studied and worked on both sides of the Atlantic, it is natural for me to explore contrasts and similarities between European and North American perspectives. The membership of international advisory boards of national research councils (e.g. Switzerland, Israel) and universities (e.g. Warsaw) provides me with first-hand experience in dealing with the expectations of different cultures and institutional systems. Cross-national comparisons are a running theme in my research. Most recently, I have focused on the ways in which social policies shape intergenerational family ties in European countries. I am also involved in large-scale research on multigenerational families in China and Europe.*

*My nomination comes from the Royal Netherlands Academy of Arts and Sciences (KNAW). I served as*

*vice-president for five years. This academy was a member of both ICSU and ISSC. Rather unique is that it covers all scientific disciplines, and also houses the fine arts and a young academy.”*

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## **Academic background**

Pearl Dykstra is Professor of Empirical Sociology at Erasmus University Rotterdam and Deputy Chair of the Group of Chief Scientific Advisors to the Cabinet of European Commissioners.

Previously, she had a chair in Kinship Demography at Utrecht University and was a senior scientist at the Netherlands Interdisciplinary Demographic Institute in The Hague. She was director of research of the Department of Public Administration and Sociology at the EUR between 2015 and 2019. She serves as Scientific Director ODISSEI, the Open Data Infrastructure for Social Science and Economics Innovations.

She is an internationally regarded specialist on intergenerational solidarity, aging societies, family change, aging and the life course, and loneliness. In 2012 she received an ERC Advanced Investigator Grant for the research project “Families in context”, which focuses on the ways in which policy, economic, and cultural contexts structure intergenerational and gendered dependencies in families.

Large scale projects for which she has been awarded grants include the Netherlands Kinship Panel Study (NKPS) and the EU 7th Framework programme MULTILINKS.

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## **Past and current positions**

### **Current positions**

- Full Professor of Empirical Sociology, Department of Sociology, Erasmus University Rotterdam
- Deputy Chair of the Group of Chief Scientific Advisors to the Cabinet of European Commissioners
- Member of the Board of the Social Sciences and Humanities Division of the Netherlands Organization for Scientific Research
- Scientific Director ODISSEI, Open Data Infrastructure for Social Science and Economics Innovations

### **Past positions**

- 2015-2019 Director of Research, Joint Department of Public Administration and Sociology, Erasmus, University Rotterdam
- 2014-2016 Thematic expert on the Active Ageing Index, European Commission’s Peer Review in Social Protection and Social Inclusion



- 2011-2016 Vice President of the Royal Netherlands Academy of Arts and Sciences (KNAW)
- 2009-2015 Chair exam committee, Department of Sociology, Erasmus University Rotterdam
- 2009 Consultant for the Population Unit of the United Nations Economic Commission for Europe (UNECE)
- 2009 Coordinator Generations and Gender Programme (GGP)
- 2002-2009 Chair in Kinship demography, Universiteit Utrecht
- 2000- Director Netherlands Kinship Panel Study (NKPS) [In 2010 the NKPS was nominated for the first data prize of the Data and Networking Services (DANS)]
- 2000 Lecturer, Department of Sociology and Social Gerontology, Vrije Universiteit Amsterdam
- 1990-2009 Senior researcher, Netherlands Interdisciplinary Demographic Institute, Den Haag
- 1985-1990 Research associate, Department of Social Research Methods, Vrije Universiteit, Amsterdam

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#### **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

Pearl Dykstra is an elected member of the Netherlands Royal Academy of Arts and Sciences (KNAW) since 2004 and served as Vice-President from 2011-2016. She was an elected member of the Dutch Social Sciences Council (SWR) from 2006-2016. Over the years she engaged in a large number of activities of the Academy: she chaired several advisory committees, participated in numerous jury's and chaired subdivisions within the Academy. Currently she chairs the advisory committee preparing a report on Pandemic Preparedness Plan.

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#### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Pearl Dykstra currently serves as Ordinary Member of the ISC Governing Board and does so to great satisfaction. Besides being an outstanding and excellent researcher (evidenced by being a member of the Dutch Academy), she thus is a highly skilled and professional board member who has served on numerous committees and boards over the years, as is shown in her short CV in the fields above. Especially her work as Vice-president of the Royal Netherlands Academy and her work as Ordinary Member of the ISC Governing Board over the last years show her expertise and qualities in this respect.

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#### **Experience in scientific, academic and other relevant organizations**

Relevant positions on her CV are:

- Deputy Chair of the Group of Chief Scientific Advisors to the Cabinet of European Commissioners
- Member of the Board of the Social Sciences and Humanities Division of the Netherlands Organization for Scientific Research
- Scientific Director ODISSEI, Open Data Infrastructure for Social Science
- 2015-2019 Director of Research, Joint Department of Public Administration and Sociology, Erasmus University Rotterdam
- 2011-2016 Vice President of the Royal Netherlands Academy of Arts and Sciences (KNAW)
- 2009 Consultant for the Population Unit of the United Nations Economic Commission for Europe (UNECE)
- 2009 Coordinator Generations and Gender Programme (GGP)
- 2000- Director Netherlands Kinship Panel Study (NKPS) [In 2010 the NKPS was nominated for the first data prize of the Data and Networking Services (DANS)]

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**Why is the nominee particularly suited to hold the proposed position?**

As can be told by the information provide above, Pearl Dykstra is an experienced board member and, more specially, an experienced board member of the ISC Governing Board. She is highly motivated to continue her efforts for the ICS.

**Anna Erdei**

Deputy Secretary-General, Hungarian Academy of Sciences



Nominator: **Hungarian Academy of Sciences**

Nationality: **Hungarian**

Country of residence: **Hungary**

Discipline: **Biology, chemistry**

Born in: **1951**

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**Motivational statement**

*"I believe I possess the experience needed to serve effectively as a board member in such an ambitious, evolving organisation as the International Science Council. My scientific work in the field of immunology has been devoted to the exciting research area of the complement system, which has been a rewarding subject to study for the benefit of mankind – today more than ever. I have 46 years experience as educator at university level, including extensive experience in supervision of graduate students at masters and doctoral levels and an interest and involvement in curriculum and textbooks development. My positions as Head of Department of Immunology (1993- 2015) and Head of Doctoral School of Biology at Eötvös Loránd University ( 2000-2021) and my involvement in research assessment as the President of the Life Sciences Board of the Hungarian Research Fund (2008-2014) were good foundations for my positions as Secretary General of European Federation of Immunological Societies (2000-2015) and Council Member of International Union of Immunological Societies (2007-2013) as well as for my recent position as Deputy Secretary-General of the Hungarian Academy of Sciences (2020-).*

*In my most recent position I have been devoted to coordinating the science outreach and engagement programmes of the Hungarian Academy of Sciences, including presiding over the month-long Festival of Hungarian Science. At a time when so many decisions are being made on the basis of science, it is becoming increasingly important to cultivate modern citizens with a base level of science literacy. I would be honoured to join the efforts of the International Science Council in this noble endeavour."*

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## Academic background

Anna Erdei obtained her MSc in Biology and Chemistry at the Faculty of Natural Sciences at Eötvös Loránd University, Budapest, Hungary in 1974. She received her PhD at the Hungarian Academy of Sciences/Eötvös Loránd University in 1984. She became Doctor of Science (DSc) of the Hungarian Academy of Sciences in 1993 and became Full Professor (Dr. habil.) at Eötvös Loránd University in 1993. Between 1993 and 2015, she served as the Head of Department of Immunology at Eötvös Loránd University, Budapest.

As an immunologist, she is one of the leading experts of the complement system. Her main research interests include the instructive role of innate immunity; function of macrophages, dendritic cells and the complement system (regulation of DC, B and T lymphocyte functions by complement); their role in autoimmune disorders (RA, SLE) and Mechanism of allergic reactions.

Besides research, teaching has always remained crucial in her life. She has been supervising Master and PhD students' work, has been a Tutor and PhD-reviewer (in Budapest, Oxford, Uppsala, Odense) and has been an Invited Lecturer at national and international schools. She has published more than 200 in-extenso, peer-reviewed papers and is the author or co-author of several immunological textbooks, the editor of 1 book (CRC Press), and the Co-author of a Chapter in Fundamental Immunology (Ed. W. Paul).

In recognition of her scientific achievements, she has received several awards and honours including the Széchenyi Prize of the State of Hungary and the Hungarian Order of Merit, Commander's Cross.

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## Past and current positions

### Academic positions/employment

- 2015 – Professor emerita, Department of Immunology, Eötvös Loránd University, Budapest,
- 2015 -2021 Professor, Department of Immunology, Eötvös Loránd University, Budapest,
- 1993- 2015 Professor, Head of Department of Immunology, Eötvös Loránd University, Budapest,
- 1989 -1993 Associate Professor, Department of Immunology, Eötvös Loránd University, Budapest,
- 1987 -1989 Visiting Scientist at Basel Institute for Immunology, CH
- 1984 -1986 EMBO Research Fellow, Oxford University, UK
- 1980 -1984 Senior Lecturer, Department of Immunology, Eötvös Loránd University, Budapest,
- 1974 -1980 Assistant Lecturer, Dept. of Immunology, Eötvös Loránd University, Budapest
- 1987-2007 (2-4 weeks/year) Visiting Scientist, Weizmann Institute of Science, Rehovot, Israel
- 1990-2003 (1-2 weeks/year) Visiting Scientist at University of Innsbruck, Austria

## Role in scientific community

- Deputy Secretary-General of the Hungarian Academy of Sciences (2020- )
- Vice President of the Section of Biological Sciences, Hungarian Academy of Sciences (2017-2020)
- Secretary-General of European Federation of Immunological Societies (2000-2015)
- President of the Life Sciences Board of the Hungarian Research Fund (2008-2014)
- Council Member of International Union of Immunological Societies (2007-2013)
- Head of Doctoral School of Biology at Eötvös Loránd University (2000- 2021)
- Councilor of International Complement Society (1999-2004)
- President of Hungarian Society for Immunology (1995-1998)

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## Affiliation to and/or current/past/future role within the nominating ISC Member organization

Professor Erdei has been Deputy Secretary-General of the Hungarian Academy of Sciences (MTA) since September 2020. Between 2017 and 2020, she served as Vice President of the Section of Biological Sciences. As Deputy Secretary-General her duties include coordinating the Academy's community outreach efforts in order to find innovative tools for raising public awareness and acceptance of science. She chairs the organising committee of the month-long Hungarian Science Festival (Magyar Tudomány Ünnepe), which offers various opportunities for broad audiences to explore lectures, workshops, roundtable discussions, conferences and cultural events at the Academy. The Academy seeks to communicate science in a way that is consumable to national policy-makers and the general public alike. The 2020 events concentrated on the impacts of the Covid-19 pandemic and showcased possible novel treatments, medicines in development and examined the societal impacts of the pandemic as well. The Academy's events that were broadcast online attracted tens of thousands of visitors and generated a considerable media coverage. Professor Erdei also led a team that prepared an educational video broadcast by the State media that explained the mechanisms of the various types of Covid-19 vaccines: [This is How Vaccines Protect us from Coronavirus | MTA](#).

Professor Erdei is chairing the Academy's Presidential Committee on Public Education, which is supporting the Academy's Secondary School Alumni Programme designed to promote research careers among the high school generation. Until recently, she had also been engaged in the work of the Academy's Science Ethics Committee.

MTA is also co-organiser of the World Science Forum series in partnership with ISC, UNESCO, AAAS, IAP, TWAS, EASAC and GYA.

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### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Professor Erdei is an outstanding scientist who runs a flourishing laboratory in the Immunology Department of Eötvös Loránd University Budapest, while simultaneously takes part in the governance activities of the Hungarian Academy of Sciences and is heading its Outreach and Engagement efforts. She took an active role in the governance of international scientific communities through holding the respective posts of Secretary General of the European Federation of Immunological Societies (2000-2015) and Council Member of the International Union of Immunological Societies (2007-2013).

As Deputy Secretary-General she has been in charge of the production of policymakers' booklets, assessment studies and statements developed by the Academy in consultation with national stakeholders.

Professor Erdei is ready to devote her time and attention to the work of the International Science Council and she would be honoured in particular to share her experience in the Committee for Outreach and Engagement.

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### **Experience in scientific, academic and other relevant organizations**

Besides actively engaging in the governance of the International Union of Immunological Societies (IUIS) and the European Federation of Immunological Societies (EFIS), she became involved in activities of ongoing interest to these organisations in the areas of education, gender equality, career development and increasing the visibility of female scientists.

As Council member of IUIS, she was involved in the design and implementation of capacity building and training programmes in various parts of the world including Latin America and Asia. The training courses in immunology covered topics from basic theories to technological breakthroughs and clinical success in novel treatments of immunotherapy. Professor Erdei also took part as lecturer in the programmes.

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### **Why is the nominee particularly suited to hold the proposed position?**

Professor Erdei brings a considered and thoughtful approach to leadership and an openness needed to cultivate international collaborations. Her expertise in the promotion of science and generation of science policy advice would serve her well in her role as Governing Board member of the International Science Council.

## Terrence Forrester

Chief Scientist, The UWI Solutions for Developing Countries



Nominator: **Caribbean Academy of Sciences**

Nationality: **Jamaican**

Country of residence: **Jamaica**

Discipline: **Medicine**

Born in: **1950**

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### Motivational statement

*“Science is a vital tool for apprehending and manipulating our environment writ both large and microscopic. The facility for using science as a tool with skill for predictable outcomes and impact is unevenly distributed across nation states with there being an obvious gradient, in part related to GDP. Admittedly, there is a chicken and egg relationship between the two, but equally the compression of time available to accomplish the job of improving capacity and capability in lower performing countries by the sheer weight of accelerating globalisation requires that novel means be identified to upskill those countries (principally LMICs). The ISC can and perhaps ought to play a pivotal role in this creative process to assess science systems and customise strategies for upgrading, perhaps using new transformational approaches. I would be privileged to participate in and contribute to such a project among other ISC duties.”*

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### Academic background

Professor Forrester is an internationally recognised scientist with a principal focus on the influence of early life malnutrition on risk of cardio-metabolic disease and neuropsychological outcomes. He has provided technical advice to several organizations including PAHO (Pan American Health Organization), WHO Geneva, UK Medical Research Council, The Wellcome Trust, and The Royal Society. He has a strong interest in how science systems are structured for output and impact especially in LMICs very especially for SIDS.

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### **Past and current positions**

- 1990-2005 Scientific Secretary, Commonwealth Caribbean Medical Research Council
- 1993- 2000 Secretary (Jamaica), Royal Society of Tropical Medicine and Hygiene
- 1996-2007 Scientific Advisor (Caribbean), The Novartis (CIBA) Foundation
- 1996 -2010 Council Member, Society for Developmental Origins of Health and Disease
- 1997-present Member International Union of Nutrition Sciences (IUNS)
- 1999-2008 Member, Advisory Committee of Health Research, Pan American Health Organization/World Health Organization
- 2002 WHO Task Force on Diet, Nutrition and Long Term Health
- 2003 Caribbean Commission on Health and Development
- 2006-2013 Council Member, International Society of Hypertension
- 2009-2013 Trustee, Pan American Health and Education Foundation
- 2014 -present Commissioner, National Commission on Science and Technology
- 2014 -2015 WHO Ad hoc Working Group on Science and Evidence for Ending Childhood Obesity
- 2017 -present Fellow, Caribbean Academy of Sciences
- 2017 -present Fellow, The World Academy of Sciences

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### **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

Professor Forrester was first affiliated with the ISC through his role as a reviewer for the current ISC strategic plan. He joined the ISC Advisory Group for Small Island Developing States in 2020 where he supports the chair, Sir Peter Gluckman in the development of this nascent sub organization. He is not infrequently consulted by ISC for advice on science in the Caribbean. Professor Forrester is very keen to work on evaluating the science systems in LMICs with a diagnostic lens so as to contribute to developmental strategies to improve these towards greater harnessing of assets to deliver improved outcomes and impacts nationally and internationally. He has a special focus on SIDS living and working as he does in Jamaica a quintessential small island developing states.

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### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Professor Forrester is a recognised international scientist with a vision of improving the health and future prospects of one third of the world's population who suffer malnutrition.

Professor Forrester commands national, regional and international respect and would be a good representative and advocate for the ISC in the global science arena.

Professor Forrester by virtue of functional networking, working with The Royal Society and the Commonwealth Advisory Group for Science to CHOGM and belonging to the INGSA group is very familiar with new and emerging issues.

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### **Experience in scientific, academic and other relevant organizations**

Professor Forrester's experience in regional science organization, national capacity development and funding administration formed the first foundational stone in a lengthy experience with science and academia. As above his advice has been sought by international agencies as well as funders and he has gained experience through doing so. Perhaps the most recent learning engagements were with The Royal Society in the planning and execution of the last Commonwealth Science Conference in Singapore. That coupled with i. his ongoing contributions to Science and Policy through INGSA, and ii. global collaborative science on improving the outcomes of children suffering early adversity define him as having these required attributes.

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### **Why is the nominee particularly suited to hold the proposed position?**

Professor Forrester has the required qualifications and experience as well as international involvement to contribute meaningfully to the ISC. He is passionate about improving science capability and capacity in LMICs in order both to unlock potential and also to have LMICs contribute uniquely to global science. Professor Forrester currently enjoys a constructive and positive engagement with ISC Officers including Professors Daya Reddy and Sir Peter Gluckman and would work well with them and the ISC administration.

## Irvy Gledhill

Visiting Adjunct Professor of Flow Physics, Flow Research Unit School of Mechanical, Industrial and Aeronautical Engineering University of the Witwatersrand Johannesburg South Africa



Nominator: **International Union of Pure and Applied Physics (IUPAP)**

Nationality: **South African**

Country of residence: **South Africa**

Discipline: **Physics**

Born in: **1957**

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### Motivational statement

*“The statement of universality in science, of universal access to science and universal participation in science, has been a motivator of all aspects of my career. The freedom of interaction of scientists has seemed to me to allow scientists to tunnel under political and economic barriers and interact as a community across the globe. That community is founded on the scientific integrity that we recognise in our colleagues, and on the unfolding of understanding that is taking place across all the sciences. The succession of ISSC, ICSU and ISC global projects and international years of scientific focus has had critical impact on society, and on the evolution of scientific concepts.*

*The responsibility that rests on scientists has never been greater, in my view, than it is now, since the power of humans over their environment and over each other has never been more complex and more dangerous than at present. The need for a functioning interface between science, policy and action will only increase in the coming years, and rests on the enablement of scientists (in the broad sense) to work with each other and to test each other’s paradigms and conclusions.*

*The responsibility of scientists has to include standing up to unfairness and opening paths to diversity. The Gender Gap collaborative project, for example, was specifically designed to bring social scientists together with natural, mathematical and computational scientists, and to complement the UNESCO SAGA (STEM and Gender Advancement) framework. It now provides hard evidence on which well-intentioned initiatives can be based. ISC values provide impetus for the inclusion of peoples and regions who have, in the past, been forgotten or marginalised.*

*This work has to be underpinned by sound scientific infrastructure and good governance. I am willing to work towards these goals.”*

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## Academic background

Irvy (Igle) Gledhill obtained her B.Sc. with Honours from Rhodes University, South Africa, and her Ph.D. in plasma physics from the University of Natal, South Africa. She did post-doctoral work on thermonuclear fusion at the University of California, Los Angeles, and on Space Shuttle physics at Stanford University. For 30 years, she specialised in transonic computational fluid dynamics at the Council of Scientific and Industrial Research of South Africa producing mostly technical reports and doing applied research in collaboration with industry. She also contributed within multidisciplinary collaborations including rational drug design, ocean engineering, and mine safety. Her primary research interest is now in the aerodynamics of accelerating objects. Igle has been deeply involved in the social aspects of science practice. She served on the executive board of the Gender Gap project funded by ISC. She is Past President of the South African Institute of Physics, council member of the South African Council for Natural Scientific Professions and of the Academy of Science of South Africa, and has been a member of the World Cultural Council Interdisciplinary Committee. She is an Editor of African Physics Newsletter, and one of three Vice-Presidents of the Network of African Science Academies.

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## Past and current positions

- 1982 University of Natal, Durban Part-time lecturer
  - 1983-1985 University of California, Los Angeles Postdoctoral Research Associate, Thermonuclear fusion and plasma simulation
  - 1985-1987 Stanford University, California, Postdoctoral Research Associate, Space, Telecommunications and Radioscience Lab (STARLab), Space shuttle physics, plasma simulation, galactic simulation
  - 1987-2017 CSIR, Principal Researcher, Defence, Peace, Safety and Security: Fellow, 2001-2010
  - 2014-2015 Joint project with U. Witwatersrand, mini-sabbatical
  - 2015-present Visiting Adjunct Professor in Flow Physics, U. Witwatersrand
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## Affiliation to and/or current/past/future role within the nominating ISC Member organization

Igle Gledhill played a major role in IUPAP's Working Group on Women in Physics since 2005: Member representing African countries 2006-2011, Vice-Chair 2011-2014, Chair 2014-2017, Past Chair and Associate Member 2017-present.

She was Chair of the Local Organizing Committee of the 2011 IUPAP International Conference on Women in Physics that took place in Stellenbosch, South Africa. This conference was key for the organization of women in physics working groups in several African countries that were not

previously affiliated with IUPAP. This expanded network was useful to raise awareness on the situation of women of physicists and allowed IUPAP to increase its membership in Africa.

She represented the IUPAP for the writing of the Gender Gap in Science project which, co-led by IMU and IUPAC, was funded by ISC. Her key role was recognized in her being one of the three coordinators of the project with Marie-Francoise Roy (IMU) and Mei-Hung Chiu (IUPAC). She also chaired the organizing committee of the African Regional Workshop associated to the project.

She is currently serving on the Task Team for the organization of the IUPAP's Centenary Celebrations.

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### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Igle Gledhill can bring expertise and energy in the areas of

- freedom and responsibility
- science planning
- outreach and science literacy
- diversity and inclusion

Her particular role in IUPAP and in sciences for the past 15 years was very much related to these items.

In terms of research and scholarship on key global challenges, her collaboration experience has prepared her to work across disciplines and across natural and social sciences. In terms of evidence on which policy and interventions can be based, the Gender Gap project was designed to support decisions on projects designed for maximum impact.

In terms of advancement of scientific rigour, creativity and relevance in all parts of the world, her participation in formulating professional codes of conduct, in scholarly publishing and Open Science, and in fostering the advancement of women from different cultures is relevant, as is her work across Africa both for IUPAP's Working Group on Women in Physics and for the Network of African Science Academies. She will contribute to the voice for Africa and for developing countries.

She would participate with energy in the Board's roles of leadership, governance and ensuring sustainability, and in delivering on the vision and mission.

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## **Experience in scientific, academic and other relevant organizations**

She was one of the three coordinators and served on the Executive Committee of the Gender Gap in Science project funded by the International Science Council.

She is one of three Vice-Presidents of the Network of African Science Academies, with the portfolio of International Relations and Scientific Affairs.

She is a member of Council of the Academy of Science of South Africa and co-chair of the Committee on Scholarly Publishing in South Africa. She is engaged in a team drafting policy on Open Science for the government of South Africa.

She is Past President of the South African Institute of Physics. She is Editor of African Physics Newsletter, having just completed a term as Editor-in-Chief.

In terms of integrity and responsibility in science, she is council member of the South African Council for Natural Scientific Professions, which is responsible for the Code of Conduct and registration of professional scientists in South Africa.

As member of the World Cultural Council Interdisciplinary Committee, she has experience in selecting candidates across fields and cultures for the Einstein Prize. During her time at the Council for Scientific and Industrial Research, she chaired the Strategic Research Panel, which was instituted to foster collaborative multi-disciplinary projects.

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## **Why is the nominee particularly suited to hold the proposed position?**

Igle Gledhill, as an applied physicist with collaborative experience, will bring to ISC exceptional competences related to interdisciplinary activities for which she has unique and great records. She will also be a champion for inclusiveness in science, given her strong experience and practice. Igle is a very nice person with whom it is very easy to interact. She is an incredible listener, a quality that is so hard to encounter these days a world where the reinforcement of oneself perceptions and beliefs is the rule. For all these reasons, Igle Gledhill is an excellent candidate which will certainly contribute with expertise, comprehension and hard work to the board of ISC.

## Robin Grimes

Steele Professor of Energy Materials, Imperial College London



Nominator: **The Royal Society, UK**

Nationality: **British**

Country of residence: **United Kingdom**

Discipline: **Chemistry**

Born in: **1961**

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### Motivational statement

*“As a CSA I was responsible for providing science advice to government Ministers and officials, ensuring that policy is informed by and has access to the best scientific data and networks. In the Foreign service I mainstreamed science as a tool in the UKs diplomatic tool-box, placing science collaboration at the heart of key international relationships. In the Ministry of Defence, I continued this work within groups such as the Comprehensive Test Ban Treaty Organisation and the Iran Deal (JCPOA), where a focus is on the responsibilities scientists have towards the international community. In all cases impact only follows from the confidence brought about by excellent science output. With my work during Brexit I tried to ensure the UK government saw evidence of the benefits that science collaboration and connections bring but that for these to work it must be with the minimum of hindrance to ensure adequate access. Finally I wish to comment upon my roles in having helped develop the Newton Fund, which delivers £700M bi-lateral science collaboration to 16 countries and of the UK’s Science and Innovation Network, which doubled in size to 100 science attachés in 40 places around the world. I would like to bring these experiences and expertise to the service of the ISC more broadly as I have to the ISC committee on Committee for Freedom and Responsibility in Science. My experience working with the ISC has confirmed my belief that the Council promotes the same values that I have. Being a member of the ISC governing board would allow me to expand the work I have been doing around existing technologies, while looking to emerging challenges.”*

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### Academic background

- University of Nottingham, B.Sc. July 1982, Mathematical Physics
- Case Western Reserve University, M.S. May 1985, Materials Science
- University of Keele, Ph.D. August 1988, Chemistry



- Published over 330 refereed research papers in a variety of science journals.
- Graduated over 30 PhD students, who have gone on to work in industry, national laboratories and university positions in the UK, other European countries, the US and Australia.
- Institute of Materials Rosenhain Medal 2002, Griffith Medal 2010.
- Fellow of the Royal Society, the Royal Academy of Engineering and the Australian Academy of Technology and Engineering.

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## Past and current positions

### Current

- Steele Professor of Energy Materials, Department of Materials, Imperial College, from Oct 2020.
- Honorary Professor Department of Science, Technology, Engineering and Public Policy, UCL, from 2018.
- Ministry of Defence, Chief Scientific Adviser (Nuclear), from April 2017.
- Foreign & Commonwealth Office, Chief Scientific Adviser, Feb 2013 – Aug 2018.

### Past

- Director, Rolls Royce University Technology Centre, Nuclear Engineering, May 2010 – Feb 2013.
- Founding Director, Centre for Nuclear Engineering, Imperial College London, Aug 2008 – Feb 2013.
- Professor of Materials Physics, Department of Materials, Imperial College, Oct 2002 – Sept 2020.
- Bernd T. Matthias Scholar, Los Alamos National Laboratory (USA), July 2002 – July 2001, Continuing as consultant and visiting scientist to 2011 and then from 2019.
- Reader in Atomistic Simulation, Department of Materials, Imperial College, Oct 1998 – Sept 2002.
- Governors' Lecturer at the Department of Materials, Imperial College, Jan 1995 – Sept 1998.
- Assistant Director of the Davy Faraday Research Laboratory, The Royal Institution of Great Britain, Oct. 1990 – Dec. 1994. Visiting Research Fellow from Jan 1995 – July 2000.

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## Affiliation to and/or current/past/future role within the nominating ISC Member organization

A Fellow of the Royal Society since 2018, with active involvement for many years prior to that.

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## **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Addressing the ISC stated mission:

1. Grimes has promoted international research and scholarship as a researcher on energy issues and also as the Chief Scientific Adviser to the UK FCO on a range of global challenges from agritech to the future of AI, from climate issues to the provision of emergency response.
2. He has promoted evidence-informed policy making within the UK government but also to international organisations such as the IAEA and multiple governments. He has appeared to be questioned in front of government (select) committees in public and has extensive experience in how to effectively inform government officials to the highest levels.
3. Grimes has embedded scientific rigour in all research activity and more widely by promoting excellence through his refereeing of national (e.g. research councils,) and international science programmes (e.g. the Newton Board, Royal Academy of Engineering, External Affairs Committee).
4. He is currently a board member of the ISC's Committee for Freedom and Responsibility in Science and also the Royal Society International Programmes Advisory Group.  
Of specific relevance to convening scientific expertise to issues of major concern has been his continuing work on the JCPOA where he chairs various groups providing technical advice.

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## **Experience in scientific, academic and other relevant organizations**

Grimes has 30+ years of experience in running a substantial research group focused on the provision of energy. He has secured research funding from Industry, research councils, national and international laboratories. His research employs computer simulation and high performance computing to predict the structural and dynamic behaviour of materials. This has allowed him to identify ways in which defects in materials modify materials properties.

As part of his academic work he has implemented assurance processes to monitor scientific research activity both in the UK and internationally. As well as publishing work in science and policy journals, he has been on editorial teams assuring the publishing process. His academic assurance work has been international as external examiner for undergraduate courses and in setting-up graduate courses within other nation's educational constraints. He is a member of the British Council's Education Advisory Group.

Grimes has relevant experience in managing risk and resilience addressing a variety of issues beginning with Fukushima in 2011 up to and including currently Covid-19 through Scientific Advisory Group for Emergencies (SAGE). From 2016-2018 he co-chaired an OECD expert group to report on Science Advice: international cooperation & exchange of data & information during a transnational crisis.

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**Why is the nominee particularly suited to hold the proposed position?**

He has developed significant negotiation and diplomacy skills as a Chief Scientific Advisor, leading UK delegations to multilateral fora, from the Arctic Conference to the IAEA General Conference. This has been accompanied by experience in presenting the UK's position on issues from cyber and big data to Agritech and anti-microbial resistance.

His work within two UK Ministries and with many other Government's organisations means he has a deep understanding of Government structure. This has enabled him to extend the use of Science Diplomacy. For his science diplomacy work he has been awarded: in 2019 the Japanese Foreign Minister's Commendation for promotion of scientific and technological cooperation between Japan and the UK; and in 2018 the Luis Federico Leloir Award for International Cooperation in Science, Technology and Innovation, from the Argentinian Ministry of Science.

He has written and spoken frequently on the importance of science in diplomacy and foreign policy, and during his time as a science adviser helped particularly to strengthen the UK's scientific cooperation with Argentina, Russia, Turkey, South Africa and India.

**Anet Režek Jambrak**

*Full Professor, University of Zagreb*



Nominator: **Global Young Academy (GYA)**

Nationality: **Croatian**

Country of residence: **Croatia**

Discipline: **Food engineering**

Born in: **1980**

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### **Motivational statement**

*“My motivation is to foster scientific excellence, innovation, collaboration, and a multidisciplinary approach to research in various fields and technologies. I also hope to ensure the long-term recognition of University of Zagreb, Global Young Academy, and International Science Council (ISC). Furthermore, my objective is to contribute to sustainable growth of the international economy and society, which would be faster achieved with interdisciplinary collaboration and a combination of national and regional cooperation. Organizations like the ISC can support the strengthening of the use of scientific evidence in policy and public action. I am motivated to promote knowledge sharing, counteract misinformation and support relationships of trust between science and its wider publics. Very important and future oriented is research towards the 2030 Agenda for Sustainable Development: To achieve the 17 ambitious goals that aim to reduce inequality and poverty and promote prosperity and peace. My motivation is to spread scientific knowledge from across all disciplines and encourage that sustainability should have a major role to play in identifying transformative pathways towards the sustainable and equitable use of planetary resources. My research focus is also on Industry 4.0 and digitalisation. Therefore, my role as member of ISC Governing Board would be to promote digital revolution, through understanding, addressing, and responding to the powerful opportunities of digitalisation. My motivation would be also to support interdisciplinary use of the natural and social sciences in fundamental and applied sciences. Society is one of the three pillars of sustainability; therefore, it is necessary to support the progress of science and the essential benefits it provides.*

*In responding to increasing societal demands for solutions to today’s challenges, I also encourage that science systems must be open and agile, so they can adjust in ways that safeguard scientific freedom and advance scientific responsibility.”*

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## Academic background

Prof Režek Jambrak is full professor and scientific advisor (permanent title) in food engineering at the University of Zagreb, Croatia, since 2018, and since 2019, head of the Laboratory for sustainable development. She was trained abroad at Coventry University, UK and at the University of Avignon, France. Her field of research is food chemistry, food physics, nonthermal processing, advanced thermal processing, sustainability, food processing, Industry 4.0 and digitalization. Since 2007, Prof Režek Jambrak has published over 100 significant scientific papers with over 3200 citations (h-index 28), and authored book chapters published by recognized scientific publishers. She is the recipient of many prizes and awards. In 2019, she was titled Highly Cited Researcher, among 0.1% world scientists (powered by Web of Science <https://publons.com/awards/highly-cited/2019>), and received the national award for science from the Government of the Republic of Croatia. In 2016, she was awarded the Young Scientist Award from the International Union of Food Science and Technology (IUFOST), and in 2011, the award to young scientists “Vera Johanides” from the Academy of Technical Sciences of Croatia. In 2010, she received recognition from the Journal of Food Engineering Elsevier: Journal of Food Engineering, for highest-cited papers. Prof Režek Jambrak recently received the [2021 Emerging Sustainability Leader Award](#).

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## Past and current positions

- 2003 – young researcher at the Faculty of Food Technology and Biotechnology, Department of Food Engineering
- 2003 – research assistant, Faculty of Food Technology and Biotechnology, Department of Food Engineering
- 2004 – research assistant, Faculty of Food Technology and Biotechnology, Department of Food Engineering
- 2009 research associate in the scientific area Biotechnical Science, Scientific Field of Food Technology
- 2009 assistant professor at the Faculty of Food Technology and Biotechnology of the University of Zagreb, Department of Process Food Engineering
- 2010 – scientific title senior research associate in the scientific area Biotechnical Science, Scientific Field of Food Technology
- 2011 – scientific title of scientific adviser in the scientific area Biotechnical Science, Scientific Field of Food Technology
- 2013 – associate Professor at Faculty of Food Technology and Biotechnology, University of Zagreb, Department of Food Engineering
- 2017 – scientific research officer (adviser) permanent in the Scientific Area Biotechnical Sciences, Scientific Field Food Technology

- 2018 – election to full professorship in Food engineering (Biotechnical sciences) University of Zagreb, Department of Food Engineering
- 2019 – head of the Laboratory for sustainable development, Faculty of Food Technology and Biotechnology, University of Zagreb

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#### **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

Prof Režek Jambrak is a member of the GYA since 2019. She has collaborated with peers in the GYA on an interdisciplinary approach to international food systems, integrating natural, biotechnical, and social sciences. Within the network, she promotes scientific freedom, dialogue about sustainability and sustainable development and the inclusive and equitable practice of science, also in opportunities for scientific education and capacity development. In her current active role in the GYA, she works with a project group to address the young scientist perspective on the UN Food Systems Summit, and coordinates an upcoming panel on this topic for the 2021 International Conference of Young Scientists. Sustainable development calls for the integration of the social, economic, and environmental dimensions of development, for which cross-disciplinary cooperation with GYA peers is ideal. Prof Režek Jambrak contributes her expertise in sustainable food processing towards fighting food waste and climate change to GYA projects, but also her ability to work with and motivate diverse groups of scientists. As a new member in 2019, Prof Režek Jambrak participated in a science leadership workshop, which addresses collaborative and creative problem solving skills, cultural dexterity and active awareness in communication and engagement.

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#### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Prof. Dr. Anet Režek Jambrak was appointed Editor in Trends in Food Science and Technology, Elsevier; Assistant Editor, Journal of Food Processing and Preservation, Wiley; Editor, Food Engineering Reviews, Springer Nature; Editor-in-chief, Processes, MDPI; and Associate Editor, Journal of Food Quality, Hindawi. She is one of the founders of the Laboratory for sustainable development at the Faculty (2019). She has led several interdisciplinary and international projects and has strong international network. She works in a team and is participating in the training of students in terms of sustainability, processes and production technologies and components of sustainability in food technology, biotechnology, and nutrition, to connect scientific research activities and projects within the future cooperation and close connection to the industries in countries of EU and the world, with a view to ensuring sustainability and sustainable development. She would contribute to the ISC Governing Board with her ability to communicate about science that is relevant to international policy issues, and about policy-for-science to promote developments that enable scientists to contribute more effectively to major issues in interdisciplinary and inclusive ways. She would promote and leadership and communication that supports defends the free and responsible practice of science.

### **Experience in scientific, academic and other relevant organizations**

Prof Režek Jambrak is a current member of Global Young Academy (GYA); of the European Union of Food Science and Technology (EFFoST) invited lectures and member of working group on Sustainability; and of the International Academy of Food Science and Technology (IAFoST). She was President of Early Career Scientist Section (IUFOST) International Union of Food Science and Technology coordinating actions of young scientists. She is a member of the Institute of Food Technologists (IFT), Society of University Teachers and Other Scientists in Zagreb and of the Croatian Society of Food Technologists, Biotechnologists and Nutritionists.

She actively played chess until 2003, and became FIDE (world chess organisation) chess master.

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### **Why is the nominee particularly suited to hold the proposed position?**

Prof Režek Jambrak has proven herself to be an effective young science leader in a national and international context. She has successfully launched her career as an established early-career food technology researcher while consistently promoting inclusivity and interdisciplinarity in science. Starting from her own research, she works with various international organizations to ensure that science has a positive and sustainable impact, and that evidence becomes part of policy in her field. Prof Režek Jambrak is experienced in collaborating with diverse groups of people and highly capable of working within the ISC Governing Board to promote the interests of science and young scientists, as well as to outwardly represent the interests of the ISC in an international context.



**Junji Koizumi**

*President, International Union of Anthropological and Ethnological Sciences; Co-Chair, World Anthropological Union*



Nominator: **World Anthropological Union/International Union of Anthropological and Ethnological Sciences (WAU-IUAES)**

Nationality: **Japanese**

Country of residence: **Japan**

Discipline: **Anthropology**

Born in: **1948**

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**Motivational statement**

*“Interdisciplinarity and diversity is most essential for making science a global public good. Anthropology is a truly interdisciplinary science which effectively lies at the intersection of social, humanistic, interpretative and engaged sciences, as well as of such natural sciences as medical, biological and environmental sciences. Human-centered anthropology with high connectivity to different fields is well placed to bring varied scientific disciplines together, particularly in the contemporary world which is facing a range of physical and human problems. Coping with these serious problems, however, involves in addition to diversity a highly innovative process of which I wish to take part in, particularly because I have experience not only in research and teaching but also in administration, evaluation and policy making. As Executive Vice President I was in charge of education, research and library and information systems of a university with the schools of medicine, engineering, arts and sciences and humanities. As Auditor of a national institute, I oversee the performance of six major research institutes in different disciplines in the humanities. As a fieldworker, I lived and worked in a poverty-stricken village in Latin America and have a first-hand knowledge of the reality at the margins of the world. At the same time, I was born and educated in Tokyo, trained at Stanford and invited by the Institute for Advanced Study in Princeton, acquainted with a process of powerful academic production at the intellectual centers. These opportunities gave me a unique view of the world and I see the necessity for efforts both by centers and peripheries as well as by a whole variety of sciences including social and humanistic sciences. I wish to work for ISC and make useful contribution for a science that is diversified, flexible, and relevant to the challenges in this age of great social transformation.”*

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## Academic background

Prof Junji Koizumi received a doctoral degree in anthropology from Stanford University in 1981, following his graduation from the University of Tokyo (BA in Liberal Arts, MA in Sociology). After post-doctoral research at University of Alberta, he has carried out research and teaching mainly at Osaka University. He is broadly interested in interpretive theories in anthropology and was invited as Member of the School of Social Science at the Institute for Advanced Study, Princeton, to work with Clifford Geertz in 1996-97. Prof Koizumi started his field research in Central America in the late 1970s and has published works on globalization, transnationality, ethnicity, social and economic transformation, conflict studies and international cooperation as well as on critiques of interpretative approach. He organized and led a multi-million, multidisciplinary project, A Research Base for Conflict Studies in the Humanities and other large-scale interdisciplinary projects including Dynamics of Cultures and Systems in the Pacific Rim. He is currently Co-Chair of WAU (World Anthropological Union) and President of IUAES (International Union of Anthropological and Ethnological Sciences) and is working for the development of world anthropology. More detailed information is available at <https://www.waunet.org/iuaes/about/leadership>.

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## Past and current positions

NIHU: Auditor, the National Institutes for the Humanities (NIHU), Japan (2016-Present). Osaka University: Professor Emeritus (2013-Present), Professor and Associate Professor (1990-2013), School of Human Sciences. Executive Vice President (2007-11); Director- General, University Library (2007-11); Advisor to the President (2006-07); Dean, School of Human Sciences (2004-06). Specially Appointed Professor (2013-2016), Institute for Academic Initiatives (IAI); Founding Director (2007), Adjunct Professor (2007-13), Invited Professor (2013-16), Global Collaboration Center (GLOCOL). SCJ: Member (2005-20), Specially Appointed Member (2020-Present), the Science Council of Japan (SCJ). Other institutions: Director, Institute for Social Research, Institute of Nuclear Safety System, Inc. (INSS) (2013-Present); Vice Director, International Institute for Advanced Studies (IIAS) (2013-15); Associate Professor, Niigata University (1987-90); Lecturer and Associate Professor, Aichi Kenritsu University (1982-87); Izaak Walton Killam Post-Doctoral Scholar and Sessional Lecturer, University of Alberta, Canada (1981-82). Invitation: Member, School of Social Science, the Institute for Advanced Study, Princeton (1996-97). National organization: President, Japanese Society of Cultural Anthropology (JASCA) (2012-14). International organizations: Co-Chair, World Anthropological Union (WAU) (2018-Present), President, International Union of Anthropological and Ethnological Sciences (IUAES) (2018-Present), Secretary-General, IUAES (2009-18), Chair/Facilitator, World Council of Anthropological Associations (WCAA) (2005-09).

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## Affiliation to and/or current/past/future role within the nominating ISC Member organization

IUAES, the International Union of Anthropological and Ethnological Sciences, is a long-term member union of both ISSC and ICSU (now merged as ISC) as well as a member union of CIPSH. In 1998, Prof Koizumi was appointed, as a Board Member of JASCA, to be the delegate of Japan to IUAES. After serving as a national delegate for eleven years, he was elected as IUAES Secretary-General in 2009 and served until 2018 when he was elected to be IUAES President for 2018-23. At the same time,

he participated in the foundation of WCAA, World Council of Anthropological Associations, and served as WCAA Chair/Facilitator for 2005-09. WCAA has developed into an association of anthropological associations now holding fifty-six member associations across the world. In 2014, Prof Koizumi as JASCA President organized a very successful IUAES Inter-Congress 2014 in Chiba based on his extensive network with IUAES, WCAA and JASCA. In collaboration with his colleagues, he strengthened both IUAES and WCAA and led the integration of IUAES and WCAA, a process successfully completed in 2017 with the formation of bicameral WAU. This achievement was awarded with the Presidential Award by the American Anthropological Association. He is currently WAU Co-Chair and IUAES President.

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### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Prof Koizumi has served in top positions at a university and other institutions, councils, organizations and associations, both in the national and international level. He has engaged in global research as an anthropology professor and has genuinely cosmopolitan experience as a leader and an administrator of international organizations. Particularly he has gained literacy in multiple disciplines in human, social and natural sciences through his experience in supervising educational and research programs in all fields of science as Executive Vice President of a major research university; evaluating and accrediting top universities in the country as a member of the government committees; auditing the performance of representative research institutes in multiple disciplines in the humanities; proposing and leading a number of large-scale multi-disciplinary research projects; reviewing and selecting, both in Japan and Europe, major grant proposals in human, social and interdisciplinary sciences; and presiding over national and international associations of the most important sort. He thus has ample knowledge and experience in planning, outreach and finance as well as in international activity and cooperation. With his standing in the national and international sphere, he will be able to make an appropriate contribution to ISC Governing Board.

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### **Experience in scientific, academic and other relevant organizations**

Prof Koizumi is expert in interpretive theories, Latin American studies, globalization, transnationality, conflict studies and international cooperation. Along with research and teaching, he has been deeply involved in administration, having served in such positions as Executive Vice President, Advisor to the President, Director-General of the University Library and Dean of School of Human Sciences, all at Osaka University which is one of the three leading universities in Japan. He also established GLOCOL (Global Collaboration Center) for international cooperation and became its Founding Director. In addition to administrative expertise, Prof Koizumi has extensive knowledge and experience in evaluation of various sorts. He audits activities of all major national research institutes in the humanities and works also for accreditation of leading national universities. He has been on a number of inter/national committees and councils and works for the review and selection of major grant and fellowship programs both in Japan (JSPS) and Europe (ERC). He has acted as evaluator of international cooperation programs by JICA (Japan International Cooperation Agency) and of educational programs of national and private universities. In 2009-13, he was a member of the Central

Education Council of the Japanese Government which makes the national policy for university education.

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**Why is the nominee particularly suited to hold the proposed position?**

Prof Koizumi has long served as President and Secretary-General of IUAES, a union member of ISSC/ICSU (merged as ISC) and CIPSH. He knows ISC well and was a member of the Transition Task Force (TTF) which played an important role in the merger of ISSC and ICSU. Since 2005, he has been a member of SCJ, the Science Council of Japan, one of the main member organizations of ISC. He is currently Auditor of the National Institutes for the Humanities (NIHU), Japan, an organization integrating six research institutes including RIHN (Research Institute for Humanity and Nature) which serves as the Asian Regional Center for Future Earth, one of the central projects for ISC. In addition to extensive leadership and oversight experience in national and international organizations, he is experienced in administration, evaluation and policy making. He was Executive Vice President of Osaka University, served as Director of major organizations, and led a number of multidisciplinary large-scale projects. He was involved in the merger of universities and foundation of new organizations. He successfully organized major international conferences and has deep understanding of the global issues including the relation between Global North and Global South.

**Byeong Gi Lee**

Member, The National Academy of Sciences, Republic of Korea



Nominator: **The National Academy of Sciences, Republic of Korea**

Nationality: **Korean**

Country of residence: **Republic of Korea**

Discipline: **Electrical engineering**

Born in: **1951**

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**Motivational statement**

*“As I understand, the National Academy of Sciences, Republic of Korea has long been a member of the ICSU and the ISSC, participating in their activities and meetings as well as making due financial sponsorship, but was not given an opportunity to serve as a member of the Governing Board or any other leadership positions. I think it may be a very good time for the ISC, newly born by merging the two predecessor councils, to open the door globally to embrace the cultures and values of NASROK and other global member organizations in the governance and activities of the ISC.*

*Personally, I had opportunities to experience various types of jobs and positions and research in my fields of study, communications. I had chances to initiate new ventures in different forms and establish new organizations. In addition, I experienced managing big academic/professional organizations such as KICS, KSEE, IEEE ComSoc, and CCSS as the president. In particular, my responsibility as the President of IEEE ComSoc gave me a great opportunity to manage a big global professional society of about 50 thousand members residing in about a hundred countries and about 30 staff working in the Manhattan office, with about 17 million USD of revenue. I was the first President from the Asia-Pacific region but was able to successfully lead the society to achieve its goals and conduct its mission. I also have experienced policy planning and management in different levels, from presidential committees to the governmental office (KCC), non-governmental organization (CCSS), and private company (Samsung Electronics).*

*If I am given an opportunity to serve as a member of the governing board of the ISC, I am willing to devote my time and effort to work together with other governing members to fulfill the goal and mission of the ISC.”*

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## **Academic background**

Byeong Gi Lee received the B.S degree in 1974 from Seoul National University, Seoul, Korea; the M.S. degree in 1978 from Kyungpuk National University, Daegu, Korea; and the Ph.D. degree in 1982 from the University of California, Los Angeles, U.S.A., all in electronics/electrical engineering.

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## **Past and current positions**

Dr. Lee worked for Granger Associates, Santa Clara, California, and for AT&T Bell Laboratories, North Andover, Massachusetts, before he joined the faculty of the Seoul National University in 1986, where he served as the Director of the Institute of New Media and Communications and the Vice Chancellor for Research Affairs. From 2008 to 2010, he served as a Commissioner of the Korea Communications Commission (KCC), and from 2012 to 2018, he served as a member of the Board of Directors of Samsung Electronics.

Dr. Lee was a co-founder of the Asia Pacific Conference on Communications, the founding committee chair of the Accreditation Board for Engineering Education of Korea (ABEEK), and the founder of the Journal of Communications and Networks. He served as a member of the Presidential Advisory Committee of Policy Planning, the Presidential Advisory Council on Science and Technology, and the Policy Committee of the Ministry of Justice, all of Korea. He served as the 2010-2011 President of the IEEE Communications Society. He also served as a Vice President of the ABEEK, the President of the Korea Society of Engineering Education, the President of Korea Information and Communication Society, and the founding President of the Citizens' Coalition for Scientific Society, all in Korea.

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## **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

Since 2014 Dr. Lee has been a member of the National Academy of Sciences, Republic of Korea. For the three years, 2017-2019, he served as the Chair of Subdivision 3 of the Natural Sciences Division.

If Dr. Lee is elected as a member of the ISC Board and participates in its activities, he will share the various activities of ISC with our Academy members. Hence, our Academy members will be more interested in ISC and participate in the ISC's activities with better understanding.

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## **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

First, as to the nominee's expertise in relation to the mission of the ISC, which includes speaks for the value of science and evidence-informed decision-making, I would single out Dr. Lee's experience as the founder and the first President of Citizens' Coalition for Scientific Society (CCSS). The CCSS is a non-governmental organization seeking the promotion of scientific decision-making (i.e., data-based, evidence-supported) of government policies as well as the advancement of science and technology, so



Dr. Lee's experience of founding it and operating it as the first president may well prove his meeting the required expertise.

Second, as to the required qualities, including vision and exceptional achievement as a scientist, I am confident that Dr. Lee's experience as the President of the IEEE Communications Society (ComSoc) may superbly meet them, as the ComSoc, a New York-based professional society, is the foremost professional society in communications with about 50 thousand members over about a hundred countries. Dr. Lee was the first ComSoc President elected from outside the Americas and Europe in its 60 years of history but has conducted the presidential job excellently, stabilizing the society's financial status from deficit to surplus, right after the 2008 world financial crisis.

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### **Experience in scientific, academic and other relevant organizations**

Among Dr. Lee's experiences, there are a number of positions related to governing or operating an organization:

First, Dr. Lee held a standing Commissioner position of the Korea Communications Commission (KCC), a governmental organization, overseeing all the laws and policies related to communications broadcasting. Dr. Lee, together with other four standing Commissioners, made decisions on various types of national policies and laws in communications and broadcasting.

Second, Dr. Lee held the position as a member of the Board of Directors of Samsung Electronics, with the BoD consisting of seven members, including three CEOs of Samsung Electronics and four independent Directors including Dr. Lee. As a member of Samsung BoD, Dr. Lee joined all the top-level decision-making of Samsung Electronics for six years.

Third, Dr. Lee held the President position of several academic/professional organizations, including the Korea Society of Engineering Education, the Korea Information and Communication Society, the Accreditation Board for Engineering Education of Korea (as Founding Chair and Vice President), the Citizens' Coalition for Scientific Society, and the IEEE Communications Society. As the President, he took charge of operating each organization and chairing its Board of Directors.

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### **Why is the nominee particularly suited to hold the proposed position?**

In addition to the affluent experiences in operating academic organizations, Dr. Lee has some unique experiences related to the governing director job of the ISC.

First, his experience as the founder and president of CCSS, an NGO for promoting scientific decision-making and scientific advancement, may be the very qualification that the ISC seeks within its governing directors. It is hard to maintain a fine organization, but it is much harder to found such an organization.

Second, his experience as the president of IEEE ComSoc, especially as the first non-Americas/Europe president, may potentially bring something new and challenging to the ISC. Getting elected to the president of such a great U.S.-based professional society as a Korean member testifies his visibility and popularity within the world communications community, and running such a big professional society successfully, even rescuing the society from the 2008 world financial crisis, well demonstrates his leadership and crisis-dealing capability.

Third, his experience as a KCC Commissioner, a vice minister level decision maker in communications and broadcasting, must have helped him expand his insight and capability to governmental matters. Likewise, his experience as a BoD member of Samsung Electronics must have helped him expand his sight and thought to industry matters.

**Benedikt Löwe**

*Division Secretary General of DLMPST/IUHPST*



Nominator: **International Union for History and Philosophy of Science and Technology (IUHPST)**

Nationality: **German**

Country of residence: **Germany/United Kingdom**

Discipline: **Mathematics, Philosophy of Science**

Born in: **1972**

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**Motivational statement**

*“Philosophy of Science is a natural meta-discipline to play an important role as the voice of reflection in science and science policy organisations, in particular in multidisciplinary entities such as our newly founded Council, ISC.*

*This methodological reflection is particularly important in the current global political situation where questioning the scientific method becomes a political instrument of propaganda. Furthermore, it is an crucial tool for encouraging the dialogue between the different disciplines that are represented in the ISC and tackling the various lacks of diversity that trouble the sciences (e.g., gender, ethnic, or geographical imbalances).*

*As a researcher straddling the disciplines (being both a pure research mathematician and a philosopher interested in the interface between sociological study of the sciences and science policy), I shall be able to help the new Council in this methodological reflection process.*

*If elected to become a member of the Governing Board of the new Council or to serve as the Secretary of the new Council, I should like to combine my administrative expertise in international science governance with my academic research interests in studying the scientific enterprise as a human endeavour.*

*I had the privilege to serve on the ICSU-ISSC Strategy Working Group (SWG) that delivered one of the fundamental documents providing a vision for the new Council, “Advancing science as a global public good”, and I should be honoured to be given the opportunity to help to implement the vision of the SWG.*

*My service as a member of the Executive Committee of the Conseil International de Philosophie et des*

*Sciences Humaines (CIPSH), the counterpart of ISC in the humanities, provides a very important link to our sister disciplines.”*

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## **Academic background**

Professor Löwe studied Mathematics, Philosophy, & History in Hamburg, Tübingen, Berlin, & Berkeley: Dr.rer.nat. Mathematics 2001 HU Berlin; Habilitation Mathematics 2004 Rheinische Friedrich-Wilhelms-Universität Bonn. He is a member of the Academie Internationale de Philosophie des Sciences (AIPS).

Research interests: mathematical logic, foundations of mathematics, applications of logic in the social sciences and the humanities, philosophy of mathematics, sociology of mathematics.

Managing Editor of Mathematical Logic Quarterly; Editor of Journal of Logic, Language and Computation (until 2014), & of Computability, Abhandlungen aus dem Mathematischen Seminar der Universität Hamburg, Tbilisi Mathematical Journal, Philosophia Scientiae, & Studia Logica (current). Edited 32 academic books and 26 journal special issues. Published over 70 papers in leading journals of the relevant fields. Regularly invited to give keynote lectures and tutorials at conferences, workshops, & summer schools. Regularly on programme committees of the relevant research events of the fields.

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## **Past and current positions**

Bonn (Mathematics): Wissenschaftlicher Assistent 1999-2003.

Amsterdam (interdisciplinary research institute ILLC): Universitair Docent 2003-2011, Universitair Hoofddocent since 2011, Director of the Graduate Programme 2004-2010, Chair of the Examinations Board 2010-2018, Chair of the Admissions Board 2018-2021.

Hamburg (Mathematics): Privatdozent 2005-2009, Professor since 2009. Head of the group “Mathematical Logic & Interdisciplinary Applications of Logic”.

Cambridge: Fellow of Corpus Christi College 2012 & 2015, Simons Fellow of the Isaac Newton Institute 2015, Bye Fellow of Christ’s College 2017, Fellow of Churchill College since 2017, Bye-Fellow and Director of Studies Lucy Cavendish College since 2019, Director of Studies Churchill College & Convenor of the Directors of Studies in Mathematics since 2021.

Elected member of the FWO research panel for philosophy and theology (Belgium, 2013-2019).

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## **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

Professor Löwe is the Secretary General of one of the two Divisions of the IUHPST, elected for two terms (from 2015 to 2023). The office of Secretary General of the Union rotates between the two

Divisions; according to this rotation, he will take over the role as Union Secretary General from 1 January 2022 to 31 December 2023.

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### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Over twenty years of teaching and research experience in mathematics and philosophy; working in a multidisciplinary area at the nexus between the formal sciences, the humanities and the social sciences fostering transdisciplinary dialogue (including supervision of interdisciplinary graduate students).

Extensive experience in the organisation of international research congresses, conferences and workshops of all sizes, both disciplinary and interdisciplinary, as well as summer schools. Successful creation of new conference series and work as chair and member of event series steering committees. Particular emphasis on gender balance and geographical balance (e.g., founding member of the Special Interest Group for Women in Computability).

Involved in setting up research training networks for cooperations between Europe and India (IERTNiL); experience in starting new research journals and book series.

Work on science strategy includes the membership in the vision committee for the planned merger between the two Amsterdam universities and membership in the Strategy Working Group (SWG) of ICSU and ISSC.

Coordination of the global outreach events for the newly created UNESCO World Logic Day (14 January).

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### **Experience in scientific, academic and other relevant organizations**

Board member (2006-2008), Vice-President (2008-2012) and President (since 2012) of the German National Committee for DLMPST/IUHPST; Board member (2011-2017 & 2021-2027) of the Dutch National Committee for DLMPST/IUHPST.

Assistant Secretary General (2011-2015) & Secretary General (since 2015) of DLMPST/IUHPST.

Assessor (2013-2017) and First Vice President (since 2017) of the International Association for Science and Cultural Diversity.

Member of the Executive Committee of CIPSH (since 2017) and member of the ICSU-ISSC Strategy Working Group (SWG, 2017). On behalf of CIPSH, Coordinator of the UNESCO World Logic Day (14 January).

Board or Council member of various international organisations: European Association for Computer Science Logic (EACSL, 2006-2016), Association Computability in Europe (ACiE, 2008-2016 & since 2017), Association for Logic in India (since 2009), SIG Higher Education of the Worshipful Company of Educators (since 2017).

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**Why is the nominee particularly suited to hold the proposed position?**

Professor Löwe has served our Union since 2011 and has been instrumental in the reshaping of our Union statutes, the activities of the Union and its Divisions, and the interaction between the Union and other bodies such as ICSU and CIPSH. He is one of those few individuals who can bridge between the disciplinary cultures of the natural sciences, the social sciences, and the humanities, and he has been using these rare skills to maximum effect in our IUHPST board.

We are convinced and certain that these skills will be very important for the formation period of the ISC as well and we are very happy that Professor Löwe is willing to offer his skills to the new Council, either as Secretary or as a member of the Governing Board.

## Helena Nader

Vice-President, Brazilian Academy of Sciences



Nominator: **Brazilian Academy of Sciences**

Nationality: **Brazilian**

Country of residence: **Brazil**

Discipline: **Biomedical sciences**

Born in: **1947**

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### Motivational statement

*"I strongly believe that education, science and its benefits should be accessible to all. Besides seeing these values in the core of ISC, I was positively impressed by the active role played by the organization during the COVID-19 pandemic. Inspired by this, and wishing to dedicate more time and energy to help ISC further fulfill its mission, I am highly motivated to offer my name to serve in the ISC Board. We are supposed to achieve the 17 SDGs by 2030, but unfortunately, up to now, we are much far behind. Sadly, what we are witnessing in the current pandemic is that we are moving in the opposite direction of one of the central premises, which is: "Leave no one behind". I recognize that this is a hard task, but if we, as scientists, do not embrace this, and work towards this ethical target, we are failing in playing our part. We have a role to play in order to help make this happen. Being from Latin America, and knowing the living conditions of the majority of the population of Latin America and the Caribbean (LAC) – which lacks basic needs such as clean water, sewage, education, health, among others – I am compelled to embrace this cause. These, and other challenges such as the Neglected Tropical Diseases, impact millions of people each year, mainly in poor countries in LAC, Africa and Asia. We can and we must reach out to those in the poorest regions of the world, so that no one is left behind. ISC covers a wide array of disciplines, engaging scientists coming from all over the globe, and from the most different realities. We must work together with governments and other stakeholders to help build a better planet, which needs to be better for all."*

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### Academic background

Professor Helena B. Nader attended the Paulista Medical School, Federal University of São Paulo (UNIFESP), where she earned a Bachelor of Sciences degree (Biomedical Sciences) in 1970. She also obtained a Licentiate degree (Biological Sciences) from the University of São Paulo in 1971. She then obtained a PhD in Molecular Biology at UNIFESP in 1974, and a post-doctoral training as a Fogarty



(NIH) fellow at the University of Southern California (1975-1977). At Unifesp, she is professor (since 1974) and director of the Institute of Pharmacology and Molecular Biology (1991 to present). Since 1985, she is a 1A (highest level) research fellow of the National Research Council for the Scientific and Technological Development (CNPq). Her research field is molecular and cell biology of glycoconjugates. She has over 200 published papers (Google Scholar h-index = 60, i10-index = 263, more than 12,350 citations) and has advised more than 100 master of science and PhD students, and more than 20 post-doctors that hold research and teaching positions in Brazil and abroad.

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### **Past and current positions**

At UNIFESP, Helena Nader is Head of the Molecular Biology Graduate Program (since 2005), and Head of the Institute of Pharmacology and Molecular Biology (since 1991). Since 1999, she coordinates the Scientific Initiation Program (PIBIC). She was the first woman to become Pro-Rector of Undergraduate Programs (1999-2003), as well as Pro-Rector of Research and Graduate Programs (2007-2008). Visiting Professor at: Loyola Medical School, USA (1991 to present); Istituto Scientifico G. Ronzonni, Italy (1985 to present); W. Alton Jones Cell Science Center, USA (1986-1987); and Opocrin Laboratorio Farmacobiologico, Italy (1978-1983). She is member of TWAS (The World Academy of Sciences), ACAL (Latin America Academy of Sciences), and the State of São Paulo Academy of Sciences. She is also the co-chair of the InterAmerican Network of Academies of Sciences (IANAS). She is Honorary President, former President (2011-2017) and Vice-President (2007-2011) of the Brazilian Society for the Advancement of Sciences (SBPC); and former president of the Brazilian Society of Biochemistry and Molecular Biology (SBBq, 2007-2008). She is a member of the National Council of Science and Technology (since 2011) and of the Superior Council of the Coordination for the Improvement of Higher Education Personnel CAPES (since 2016).

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### **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

Helena Nader is a Full Member of the Brazilian Academy of Sciences (ABC) since 1999. She has served in the Academy's Selection Commission (responsible for coordinating the election process of new members to the Academy) for several terms. Having been an active participant in various ABC Working Groups, since 2019 she is the Vice-President of ABC. Helena Nader is nationally known for her outstanding capacity of reaching out to policy makers and the general public, being constantly invited to participate in thematic sessions at the National Congress and at state or municipal government legislative branches throughout the country to provide science policy advice. She is also active in science communication, being frequently asked to give interviews to the Brazilian media. Having held leading positions for many years at the Brazilian Society for the Advancement of Science (SBPC), she has a huge network of contacts that has been instrumental for the development of initiatives promoted by the Brazilian Academy of Sciences. Currently her name is being considered as a potential candidate to be the next president of ABC, which will make her the first woman to occupy this position at the Academy.

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## **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Helena Nader is a prominent researcher, with extensive experience in mobilizing the scientific community to engage in efforts aiming at the development of a better world. Throughout her career, she has constantly demonstrated that it is possible to do cutting-edge science, at the same time that she cultivates a citizen attitude that seeks, with her work, to contribute to improve living conditions and build up a more equitable society. To achieve this, she keeps a wide and constant dialogue with the most diverse stakeholders, helping enhance the public understanding of science and supporting the development of public policies that are based on scientific knowledge. Living in the richest and most developed region of the country, she has been a champion in supporting S&T development in other regions of Brazil from the Pampas to the Amazonia -, as she clearly understands, and advocates, that talent does not choose where to be born, and that the benefits of S&T must be accessible to all. She has received many national and international awards, and for many years has been a role model for girls and women in Brazil.

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### **Experience in scientific, academic and other relevant organizations**

Helena Nader represents ABC at the Inter-American Network of Academies of Sciences (IANAS), currently being one of its co-chairs. She also sits in the IAP-Health Executive Committee, as the Academy's representative. In 2020, she represented the Academy in the Science20 (G20 engagement group for S&T) Task Force on Future of Health: Preventing Pandemics and Expanding Personalized Healthcare, held in Saudi Arabia, having been one of its co-chairs. She is a member of the Strategic Planning Committee of the BRICS Academies of Sciences Network. She is also a member of the UNESCO Global Independent Expert Group on the Universities and the 2030 Agenda (EGU2030), established in 2020. Former member of the Liaison Group of Associations for the Advancement of Science (2015-2018). In 2019, she held the Olavo Setubal Chair of Art, Culture and Science, which is a partnership between the Institute of Advanced Studies of the University of São Paulo and the Itaú Cultural Institute (Itaú is currently the largest bank in Brazil). This Chair promotes discussions and activities focused on the arts universe with a focus on cultural management. Its objective is to foster interdisciplinary reflections on academic, artistic-cultural and social themes at the regional and global levels.

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### **Why is the nominee particularly suited to hold the proposed position?**

Helena Nader is one of the most prominent scientific leaders in Brazil, playing an active role in bridging the gap between science and policy. She has a natural ability to dialogue fluidly with the different public, be it fellow scientists, students, policy and decision makers, journalists or the common citizen. This has allowed her to champion successful campaigns in defense of science, education, health and the environment. Additionally, the success of any organization depends to a large extent on the degree of commitment of its members and their ability to work as a team. Taking into account her characteristics, we are sure that, if elected, she will add value to ISC. Global capillarity is another key ingredient for the success of the organization. It is essential that ISC is able to reach out and communicate in a two-way channel, getting its message out to its audience, but also having the

ability to listen to it, in order to develop actions in line with regional aspirations and realities. Helena Nader can definitively help assure connectivity with Latin America and the Caribbean Region. Similarly, having her aboard will help build a more synergistic relationship with other key STI organizations in the Americas.

**Mona Nemer**

Chief Science Advisor of Canada, Government of Canada



Nominator: **National Research Council of Canada (NRC), Social Sciences and Humanities Research Council of Canada (SSHRC)**

Nationality: **Canadian**

Country of residence: **Canada**

Discipline: **Molecular genetics**

Born in: **1957**

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### **Motivational statement**

*“The pandemic has illuminated the necessity of multidisciplinary approaches. What began ostensibly as an infectious disease outbreak became a whole-of-society challenge, requiring the input of experts with diverse expertise. When I convened the Expert Panel on COVID-19, we included biomedical scientists, clinicians, disease modelers, behavioural scientists, and risk communication experts. As the pandemic evolved and increasingly complex questions arose, we engaged additional experts including ethicists, implementation scientists, occupational health engineers, transport specialists, and community health researchers. The collaboration between the social sciences and natural sciences and engineering has been an inspiration. It is clear that richly multidisciplinary approaches are needed for us to meet the world’s greatest challenges.*

*These include our grandest shared goals of improving the health and well-being of this planet and all of its inhabitants, like the UN’s Sustainable Development Goals. From ending poverty to gender equality to justice and strong institutions, there is a role for collaborative science and knowledge systems.*

*Beyond the multidisciplinary collaboration of disciplines, we need cooperative participation from partners from the whole world. I have been privileged in my career, as a scientist, then as a VP Research, and now as a Chief Science Advisor, to see the benefits of international collaborations in science. I know it is one of our best tools to find commonalities in this world full of complex relationships. On this point again the pandemic has been extraordinarily illustrative, from the open sharing of genetic sequences of the SARS-CoV-2 virus to the international efforts that made the vaccines a reality in under a year. The power of international collaboration is truly a marvel.*

*I firmly believe that through working together to better understand our collective human experience and the worlds around us, we can foster diplomacy and peace, and innovate and create for the benefit of all.”*

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## Academic background

Dr. Mona Nemer is Professor of Biochemistry and Canada's Chief Science Advisor. Previously Professor and Vice-President of Research at the University of Ottawa and Director of the Molecular Genetics and Cardiac Regeneration Laboratory, Dr. Nemer holds a PhD in Chemistry from McGill. She completed post-doctoral training in molecular biology at the Institut de Recherche Clinique de Montréal and Columbia University.

A leader in molecular cardiology, Dr. Nemer has published over 200 scientific articles and trained over 100 students from around the world. The discoverer of several genes essential for normal heart development and function, her work has contributed to the development of diagnostic tests for heart failure and the genetics of cardiac birth defects.

A member of the Order of Canada, Fellow of the Academy of Sciences of the Royal Society of Canada, Knight of the Ordre national du Québec and Knight of the French Republic's Ordre national du Mérite, Dr. Nemer is also a Fellow of the American Association for the Advancement of Science, and a Member of the American Academy of Arts and Sciences. She is a founding member of the Académie des Sciences du Liban and an elected fellow of the Academia Nacional de Ciencias of Argentina.

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## Past and current positions

### Administrative

- Chief Science Advisor, Government of Canada (2017-2022)
- Vice-President, Research, University of Ottawa, Canada (2006-2017)
- President, France-Canada Research Fund (2006-present)
- Executive Director, Planning and Development, Institute de recherches cliniques de Montréal (IRCM), (2002-2006)
- Director, Academic Affairs, IRCM (1997-2001)
- Member, Executive Committee, Graduate Program in Molecular Biology, Université de Montréal and IRCM site leader (1987-1995)

### Research

- Director, Research Unit in Molecular Cardiology, University of Ottawa, (2006-present)
- Director, Research Unit in Cardiac Growth and Differentiation, IRCM (1991-2006)
- Visiting Scientist, Institut d'embryologie, Collège de France (1996-1997)
- Associate Director, Laboratory of Molecular Genetics, IRCM (1988-1991)
- Fellow, Cancer Research Center, Columbia University, New York (1987-1989)

- Senior Researcher, Laboratory of Molecular Genetics, IRCM (1985-1987)
- Post-doctoral Fellow, Laboratory of Molecular Genetics, IRCM (1982-1985)
- Group Leader, Nucleic Acids Chemistry, Bethesda Research Labs, USA (1982)
- Graduate Student and/Research Assistant, Bio-organic Chemistry Lab, McGill University, Montréal (1977-1981)

#### Academic Appointments

- Professor, Department of Biochemistry, University of Ottawa (2006-present)
- Professor, Department of Pharmacology, Université de Montréal (1995-2006)
- Associate Professor, Department of Pharmacology, Université de Montréal (1991-1995)
- Associate Professor, Department of Medicine, Université de Montréal (1990-1991)
- Adjunct Professor, Department of Experimental Medicine, McGill University (1989-2007)
- Visiting Professor, Biochemistry and Biophysics, Columbia University, USA (1987-1989)
- Assistant Professor, Department of Medicine, Université de Montréal (1986-1990)

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#### **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

As Canada's Chief Science Advisor, Dr. Nemer regularly collaborates with the National Research Council of Canada (NRC) and the Social Sciences and Humanities Research Council (SSHRC) and their senior science advisors on important science-based initiatives in Canada. For example, in February 2020, the NRC hosted a symposium to celebrate the International Day of Women and Girls in Science, and to officially launch the NRC's Women in STEM Infinite Possibilities campaign. Dr. Nemer provided the keynote address, highlighting barriers women in STEM still face, and the need for the encouragement and advancement of women in STEM communities. Also in February 2020, Dr. Nemer led the Canadian delegation to the United States for the annual conference of the American Association for the Advancement of Science, the world's largest scientific conference with over 10,000 attendees from more than 70 countries. Canada's delegation included representatives from both SSHRC and the National Research Council along with representation from other Canadian institutions. An important facet of Dr. Nemer's work has been to help ensure that government science (including research conducted at the NRC and SSHRC) is fully available and accessible to the public, and that federal scientists remain free to speak about their work.

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#### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

As Chief Science Advisor, Dr. Nemer provides impartial scientific advice to Canada's Prime Minister, Minister of Innovation, Science and Industry and Cabinet and promotes science for all Canadians. An avid promoter of multidisciplinary and evidence-informed decision-making, she is an advocate for

diversity and gender equity in the STEM disciplines. She speaks frequently in public and media on issues relating to science and has served on numerous national and international committees and boards. Dr Nemer has also led or contributed to the organization of scientific congresses in Canada, the USA, France, China and Japan.

As VP Research at a leading Canadian university and as Canada's Chief Science Advisor, Dr. Nemer has led and developed many national and international initiatives. In Canada, she spearheaded the Roadmap for Open Science, which outlines recommendations to make government-funded science accessible to all, while maintaining respect for privacy, security, ethical considerations and protection of intellectual property. She also established a Youth Council to mentor Canada's next generation of scientists, and co-developed the Model Policy on Scientific Integrity, which provides guidance to federal scientists on how to speak openly about their work and a framework for employers and employees on the conduct of government science.

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### **Experience in scientific, academic and other relevant organizations**

In addition to her achievements as Chief Science Advisor, Dr. Nemer has always championed science and participated in scientific organizations and academic institutions: she was a Canadian representative on the international Human Genome Program, Director of the Life Science Division of the Royal Society of Canada, Vice President of the Academie des Sciences du Liban, Chair of the Canada-France Research Fund and Chair of the Ontario Council for University Research. She has chaired or participated on many national and international scientific advisory councils and governance boards for philanthropic organizations, research centres or networks, academic hospitals, and funding agencies.

A fierce advocate of multidisciplinary she is credited for setting up and promoting several interdisciplinary centres and institutes at the University of Ottawa notably, the Institute for Science, Society and Policy, three separate centres for Law and Technology, Health Law, and advanced material, the Institute of the Environment and The Brain and Mind Institute. Dr. Nemer's own research has contributed significantly to many fields ranging from chemistry, to molecular genetics and medicine and from fundamental to applied and translational sciences. Her outstanding contributions to science and to institutional building have earned her the respect and admiration of her peers and many honours.

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### **Why is the nominee particularly suited to hold the proposed position?**

Dr. Nemer is a well-recognized and respected national voice for science – a voice that is also recognized around the world.

A leader in molecular cardiology, an active international collaborator, and the primary Canadian federal governmental advisor on all matters of science, Dr. Nemer offers a unique combination of research excellence, leadership, advisory capacity, and government expertise that would perfectly equip her to be an effective contributor to the ISC.



Recently Dr. Nemer's principal areas of work have focused on science-for-policy – where she has worked to produce evidence-based policy recommendations on relevant and timely topics such as immunization passports, COVID-19 airborne transmission and COVID-19 in children – as well as policy-for-science, where she has worked to ensure scientific integrity within federal departments and agencies in Canada, open science and international collaboration frameworks.

Dr Nemer is a tireless advocate of science literacy and has excelled as an effective public voice for science, women in STEM and as a trusted science advisor to policy makers. A native of Lebanon, she is committed to supporting science worldwide and passionately promotes science as a foundation for democracy, development and the sustainable development goals.

**Walter Oyawa**

Director General/CEO, National Commission for Science Technology and Innovation (NACOSTI)



Nominator: **Kenya National Academy of Sciences (KNAS)**

Nationality: **Kenyan**

Country of residence: **Kenya**

Discipline: **Civil engineering**

Born in: **1965**

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**Motivational statement**

*“Aware that the International Science Council (ISC) convenes top notch scientific expertise and resources geared towards impactful international action on issues of major scientific and public importance; I am motivated to seek consideration for membership of the Governing Board of ISC, due to my extensive experience in the Science and Technology Sector, as well as my deep passion for impacting scientific Research and Development that improves the well-being, safety, and security of humanity.*

*I have published extensively, held senior leadership, administrative, and Board membership positions in universities, regulating agencies, state corporations, and international organizations. I am currently the Director General of Kenya’s National Commission for Science, Technology and Innovation (NACOSTI), whose core mandate is to regulate and assure quality in the science, technology and innovation sector, and advise the Government of Kenya on matters related thereto. Further, I am currently the Chairperson of the East Africa Science and Technology Commission (EASTECO), which is a semi-autonomous institution of the East African Community to promote and coordinate the development, management & application of Science & Technology.*

*I believe that my membership to the Governing Board of ISC would contribute to the exchange of knowledge, networking, and advancement of science internationally and regionally through collaborative engagement, partnerships and synergies with scientists from all over the world. The need for international partnerships and synergies for developing countries such as Kenya is even more apparent in a world currently disrupted by COVID 19 pandemic, where rapid and prompt exchange of experiences and scientific findings among scientists is now more than ever essential for the survival of mankind. It is clear that science will determine whether or not mankind meets this moment of peril with promise or otherwise. I kindly submit.”*

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## **Academic background**

The nominee is a Professor in Civil Engineering at the JKUAT in Kenya.

He obtained his Ph.D. with specialization in Structural Engineering at Kyoto University, Japan in 2000.

He got his M.Sc. in Civil Engineering (1995) and B.Sc. (1989) at the University of Nairobi, Kenya.

He has supervised many students and has over 100 scientific publications.

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## **Past and current positions**

Prof. Oyawa is the current Director General/CEO of the National Commission for Science, Technology & Innovation (NACOSTI) since 2020. Kenya.

He was appointed Full Professor of Civil Engineering in the Department of Civil Engineering, Jomo Kenyatta University of Agriculture and Technology (JKUAT), Kenya in 2010. He is also a registered Engineer in Kenya.

Early this year, he was appointed Chairman of the East African Science and Technology Commission (EASTECO), a semi-autonomous institution of the East African Community. this year.

Between 2015-2020, Oyawa served as the Deputy Commission Secretary/CEO (Administration & Finance) at the Commission for University Education (CUE) in Kenya.

He is also serving as a Member of the Governing Board of the Joint UK-Kenya Oversight Board in Research, Science and Innovation, which provides strategic guidance on UK-Kenya partnerships on science and innovation.

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## **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

The nominee is currently the CEO of NACOSTI, which is the current agency which provides science advice to the government on matters of policy, research and sustainable development.

He also serves as a member in the Boards of the major research institutes in Kenya. He therefore serves as the principal scientific link between science in Kenya and the international community.

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## **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

He has broad experience in all areas of scientific research and he, by nature of his current position, interacts with other foreign scientific organizations on behalf of the republic of Kenya.

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**Experience in scientific, academic and other relevant organizations**

Based on his academic training and research output; as well as his experiences in university governance at the Commission on University Education; the nominee has the requisite background and capacity to effectively serve as a Council member of ISC.

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**Why is the nominee particularly suited to hold the proposed position?**

In view of the above-stated background and current positions, especially his ongoing chairmanship of EASTECO, the nominee will be a key link for ensuring collaborations between ISC and other science institutions within East Africa.

## **Maria Paradiso**

*Chair of IGU National Committee for Italy, Past-chair of the IGU Commission on the Mediterranean Basin, International Geographical Union (IGU)*



Nominator: **International Geographical Union (IGU)**

Nationality: **Italian**

Country of residence: **Italy**

Discipline: **Geography**

Born in: **1966**

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### **Motivational statement**

*“I wish to join ISC’s work to extend the reach of science globally and its role as agent of social change and human dialogue. I have made it a career-long project to help grow scientific bodies as agents of social transformation and to expand their influence for local development through projects, initiatives, thematic networks, transdisciplinary networks, scholars’ mobilities and alliances science-policy making-local business and citizens’ associations.*

*Personally, I devoted special attention and initiatives to involve and enable scholars from less developed countries in international projects (such as VII FP Marie Curie IRSES which I led or IGU Commission Mediterranean Basin). Both in IGU and Academia Europaea I have been involved in dialogue among Mediterranean scholars for mutual understanding and support. As an economic and political geographer I am fully aware and profoundly interested in human wellbeing through equitable and sustainable access to resources (waters included oceans and seas, food, land) and intend to sustain all parts of science initiatives in this regard.*

*With my experience in leading international Commissions such as IGU Mediterranean Basin, I wish to lend my greatest support to represent Mediterranean unique as well common issues and challenges for science and dialogue in ISC and in connections with other Planet seas and oceans. Another pillar of my scientific activities deals with Information Geography (digital-physical worlds interconnections) lasting since beginning of 2000s. In this scientific area I developed experience in transdisciplinary pioneering cooperation with social scientists and engineers. This scientific cornerstone deserves much engagements in assessing ethic questions and responsibility for Science towards humanity.”*

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### **Academic background**

Professor Maria Paradiso, Doctor in Political Geography (University of Trieste, Sorbonne and other Consortiated) 1993, Msc with Honour (Magna cum laude) in Political Sciences University of Naples Federico II 1988; Post msc degree master in Urban Planning with grant (Polytechnic of Tübingen-Eni-IRI 1991), Full Professor of Economic and Political Geography at the University of Milan Statale; founder member of University Sannio in Benevento (Italy), she is a the founder and Chair of Human Mobility, Governance, Environment, Space Section of Academia Europaea (London); formerly she has served as the Chair of Academia Europaea Social Sciences Section. Maria is founder and the first Chair of the International Geographical Union (IGU) Commission Mediterranean Basin. She has served as Vice Chair of the IGU Commission – Geography of Information Society – till 2012 and has been contributing since 2001 to the development nationally and internationally of this new field of research in Geography with an interdisciplinary perspective. She has been Primary Coordinator of FP7 People Marie Curie IRSES MEDCHANGe – Euromediterranean changing relationships 612639, a research and mobility Euromediterranean partnerships with 9 Universities from Europe, North Africa, Middle East. Maria got teaching, conference, and research invitations by several Universities and Academies from all over the world such as the University of Bordeaux Montaigne, Lexington University, Sorbonne Paris, University of Toulouse, Le Havre, the National University of Seoul, University of Tokyo and Waseda, University of Ankara, Istanbul, Hassan II Mohammed Casablanca, Cadi Ayyad Marrakesh, CERES Tunis, Israeli Academy of Science and University of Cape Town. She got sponsorships by many international and national scientific and granting bodies. Her main interest in last years has been the exploration of changes in the Mediterranean relationships through narratives of people in mobilities across the Mediterranean and the better understanding of cultural dialogue and human development. Now she is starting cooperation and new endeavours in Marine studies (oceans and seas as social spaces). She has been actively engaged in equal opportunities issues on her previous campus and nationally in the Italian geographical community. Maria is author or editor of five books, dozens of edited books or journal issues and more than 100 papers in English, French, Italian.

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### **Past and current positions**

- Chair, Social Sciences Section, Academia Europaea (London)
  - Board, Academia Europaea (London)
  - Social Sciences Committee; Advisory Board, Academia Europaea, Mediterranean Hub in Barcelona
  - IGU International Geographical Union's Commission Mediterranean Basin – COMB, representative for EMUNI-Euro Mediterranean University
  - Primary Coordinator, EUFP7 People Marie Curie IRSES, MEDCHANGe 612639
  - Representative of Italy in IGU-International Geographical Union, CNR-National Council of Research
  - Chair, Italian National Committee for IGU-International Geographical Union
  - Associate Director, NETCOM-Networks and Communication Journal, Montpellier
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### **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

As the roles listed below indicate, Professor Maria Paradiso has a long-standing involvement with the IGU, and particularly since 2003 has taken increasingly senior leadership roles within this prominent non-governmental, professional organization devoted to the development of the discipline of Geography globally:

- 2003-2006 Executive Secretary, Commission Geography of Information Society;
- 2006-2012 Vice Chair Commission Geography of Information Society
- 2005 -2008 Executive Secretary, Mediterranean Renaissance Program
- 2008-2012 Chair Mediterranean Renaissance Program
- 2012-2020 Founder and Chair Mediterranean Basin Commission; the first in IGU history Commission with a regional focus.
- 2018 UGU Award as Commission of Excellence

Maria current and shared responsibilities include honorary leadership of Commission Mediterranean Basin; leadership of National Chair of Italy Committee in IGU on behalf of CNR-Italy National Council of Research; co-ordination of publications, international congresses; management of revenue and funds; and liaising with IGU and Italian National Committees.

- Corresponding Member with IGU Commission Political Geography 1993-2000
- Corresponding Member with IGU Commission Geography of Information Society 2000-2003

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### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Professor Maria Paradiso has significant and enduring experience serving and leading national and international scientific organisations, including as:

- Chair, Human Mobility, Governance, Environment, Space 2020- Academia Europaea (London)
- Chair, Social Sciences Section, Academia Europaea (London) 2018-2020
- Board, Academia Europaea (London), Social Sciences Committee 2014-2018
- Advisory Board, Academia Europaea, Mediterranean Hub in Barcelona 2012-
- Chair, IGU International Geographical Union's Commission Mediterranean Basin – COMB and COMB representative for EMUNI-Euro Mediterranean University 2012-2020
- Vice Chair, IGU Commission Geography of Information Society
- Primary Coordinator, EUFP7 People Marie Curie IRSES, MEDCHANGe 612639 2014-2018



- Representative of Italy in IGU-International Geographical Union, CNR-National Council of Research 2012
- Chair, Italian Academy of Science (CNR) ,National Committee for IGU-International Geographical Union 2014+
- Member Italian Academy of Science (CNR) ICSU board
- Chair, Relations with IGU and CNR Italian Association of Geographers
- Founder and Director, Italian Association of Geography, Geography of Information Specialty 2006-2016
- Founder of International Network Italian Geographical Society, Geography of Information 2005-2008
- Italian Pilot Project LINK Scuola Sant Anna di Pisa, Ministry of Research and Education, Minister of Economics, Local Coordinator 1997-1999 (Pioneer matinal project for establishing scientifically and practically linkage among universities, business organisations, political bodies and ngos for local development)
- Founder and Mentor of research spin off LINK Project, Sannio 1999-2004

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### **Experience in scientific, academic and other relevant organizations**

Professor Maria Paradiso has significant and enduring experience serving and leading national and international scientific organisations, including as:

- Chair, Human Mobility, Governance, Environment, Space 2020- Academia Europaea (London)
- Chair, Social Sciences Section, Academia Europaea (London) 2018-2020
- Board, Academia Europaea (London), Social Sciences Committee 2014-2018
- Advisory Board, Academia Europaea, Mediterranean Hub in Barcelona 2012-
- Chair, IGU International Geographical Union's Commission Mediterranean Basin - COMB and COMB representative for EMUNI-Euro Mediterranean University 2012-2020
- Vice Chair, IGU Commission Geography of Information Society
- Primary Coordinator, EUFP7 People Marie Curie IRSES, MEDCHANGe 612639 2014-2018
- Representative of Italy in IGU-International Geographical Union, CNR-National Council of Research 2012
- Chair, Italian Academy of Science (CNR) ,National Committee for IGU-International Geographical Union 2014+
- Member Italian Academy of Science (CNR) ICSU board

- Chair, Relations with IGU and CNR Italian Association of Geographers
- Founder and Director, Italian Association of Geography, Geography of Information Specialty 2006-2016
- Founder of International Network Italian Geographical Society, Geography of Information 2005-2008
- Italian Pilot Project LINK Scuola Santâ Anna di Pisa, Ministry of Research and Education, Minister of Economics, Local Coordinator 1997-1999 (Pioneer maternal project for establishing scientifically and practically linkage among universities, business organisations, political bodies and ngos for local development)
- Founder and Mentor of research spin off LINK Project, Sannio 1999-2004

**Why is the nominee particularly suited to hold the proposed position?**

Professor Paradiso has a fine record of academic research and teaching and is a highly regarded scholar in her discipline of Human Geography. Moreover, she has demonstrated her deep and enduring commitment to the integration of different fields of knowledge that, if elected, she will bring to the ISC Board, as the organisation, still in its developing phase, grapples with issues of inter- and transdisciplinarity that are essential to addressing the social, environmental, economic and political challenges of today. Maria also has a robust record of promoting the role of science in social transformation through her work with Academia Europaea and has helped to mobilize knowledge in international contexts through her excellent work with the IGU Commission on the Mediterranean Basin. Maria also has vast experience in education and is strongly interested in raising the profile of this vital element within the wider context of the International Science Council. Her sound interdisciplinary roots, gentle but firm approach to tackling problems, coupled with a wealth of experience, make her an excellent candidate for the ISC Board.

**Clarissa Jazmin Rios Rojas**

Research Associate at the Centre for the Study of Existential Risk, University of Cambridge



Nominator: **Global Young Academy (GYA)**

Nationality: **Peru**

Country of residence: **United Kingdom**

Discipline: **Science for policy**

Born in: **1984**

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### Motivational statement

*“I had the pleasure to work with the ISC as a member of the Expert Review Group for the creation of a new scientific agenda for the UNDRR. During this engagement, I could appreciate the brilliant and organised work performed by the ISC. At my work at the University of Cambridge, I also promote the importance of including a wide (geographical and gender) variety of scientists with vision, experience and values to contribute to our policy processes. As the ISC, I also seek to connect and convene the power of collective intelligence coming from the scientific and policy communities, the private sector and civil society to co-create policy solutions. In that way, together, we can more effectively create channels that allow us to build trust in science and influence decision-makers. I am particularly interested in the Committee for Science Planning because I would like to undertake strategic planning for topics related to science for policy and policy for science. As you can see above, I have trained myself as a Science Diplomat who has global experience who is able to be part of the team and at the same time offer leadership and innovation. I will assist the ISC Governing Board with passion because part of my life objectives is to support global and regional science initiatives and increase the profile of the science community and through the ISC we can do that by working hard to make it a trustworthy international agency that is a beacon in matters of using life and social sciences for the creation of a better world.”*

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### Academic background

Dr Rios Rojas is a Research Associate at the Centre for the Study of Existential Risk where she works at the interface of science and policymaking. Her work is focused on science for policy, international security, risks of emerging technologies, science diplomacy, foresight, co-creation of policy and management of Global Risks (such as nuclear war, the misuse of Artificial Intelligence, bioweapons, human-engineered pandemics). She is a Peruvian scientist who started her career as a researcher on molecular biology, neurosciences,

biomedicine and developmental biology. After having the opportunity to study in Peru, Finland, Sweden and Australia, she decided to use her experience and scientific background to provide scientific evidence and advice to policymakers and international institutions around the world. She has been a UN Women champion for women's economic empowerment, a UNESCO delegate, an Emerging Leader at the Atlantic Dialogues, a Fellow at the Asian Forum for Global Governance, an Expert Reviewer for the European Commission, an advisor at Women Economic Forum, the lead for the Science Advice working group at the Global Young Academy, an Eisenhower Fellow, an expert reviewer for UNDRR and the International Science Council, a World Economic Forum Fellow and an advisor to different mentorship initiatives.

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### **Past and current positions**

- Research Associate. Centre for the Study of Existential Risk. <https://www.cser.ac.uk/> (Since March 2020).
  - Founder and Director. Ekpa'palek, Latin America. [www.ekpapalek.com](http://www.ekpapalek.com) (since September 2015)
  - Fellow. Eisenhower Fellowships (EF). <https://www.efworld.org/> (June 2019 – November 2019)
  - Evaluation/Planning Committee member. United Nations Biological Weapons Convention Support Unit and the United Nations Office for Disarmament Affairs. [www.unog.ch/bwc](http://www.unog.ch/bwc) (June 2019 – August 2019)
  - Post-Doctoral Fellow at the GCSP Global Fellowship Initiative. Geneva Center for Security Policy (GCSP) [www.gcsp.ch](http://www.gcsp.ch) (November 2018 – May 2019)
  - Expert. European Commission Education, Audiovisual and Culture Executive Agency (EACEA). [https://eacea.ec.europa.eu/homepage\\_en](https://eacea.ec.europa.eu/homepage_en) (February-April 2019).
  - Expert Reviewer. Interacademy Partnership (IAP). <http://www.interacademies.org/> (February – April 2019)
  - Science and Technology Studies Trainee. EU Science Hub – Joint Research Center from the European Commission. <https://ec.europa.eu/jrc/en/research-topic/science-and-technology-studies> (May – September 2018)
  - Fellow at the Asian Forum on Global Governance (AFGG) and Raisina Dialogues.
  - Fellow at the Observer Research Foundation and ZEIT-Stiftung Ebelin und Gerd Bucerius. <https://www.orfonline.org/afgg/> (January 2018).
  - Evaluator / Advisor. Agency for Environmental Assessment and Enforcement (OEFA), Ministry of Environment of Peru. [www.oefa.gob.pe/en](http://www.oefa.gob.pe/en) (September – December 2017).
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### **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

As a GYA member since 2018, Dr Rios Rojas has been very active, particularly in the field of science advice. She was a panellist at a Science Outreach Program at Burapha University (Thailand), at the Open Forum in Science and Technology for Latin-America and the Caribbean (CILAC, Panama), and in the panel COVID-19 in Latin America, perspectives from young scientists. Further, she has been a mentor in the GYA's At-Risk Scholars Initiative, a stakeholder consultation participant at a GYA-UNESCO e-Workshop in 2020, a reviewer for GYA statements on climate change and participant in The Future of Independent Science Advice in the EU Ecosystem workshop. As co-lead of the Science Advice Working Group from May 2018 – May 2019, she co-organized a workshop on Science Advice with the International Network for Government Science Advice (INGSA) and the Leibniz Institute for Economic Research at the Annual Meeting of the GYA in 2019. She spoke at the Catalysing Science Diplomacy for the Global South panel during the workshop on Science Diplomacy at the World Forum for Women in Science in Egypt. Presentation of GYA at the JRC's (European Commission) Network Alumni event and attendance to the event Science Meets Parliament at the European Parliament.

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### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Dr Rios Rojas demonstrates scientific and strategic leadership in her work. Her widespread engagement in evidence-based science advice attests to her commitment to advancing the ISC mission. Some examples:

- Fellow, Global Future Council on Frontier Risks. World Economic Forum (Since September 2020).
- A global research agenda for disaster reduction risk. Expert Review Group, ISC and UN Office for Disaster Risk Reduction (July 2020- present).
- Today for Tomorrow bill, UK parliament. Advisory role, Lord Bird's Parliamentary Office, on drafting the Future Generations Bill (March 2021 – present).
- Foresight for the World Health Organization: Advisory role, WHO Horizon Scan 2020 for Global Health. (July 2020 – present).
- Ethics of Genomics: Advisor to Jay Flatley & WEF on future of Ethics in Human Genomics (October 2020- March 2021).
- Mexico City program – interface of science and policy making: Evaluation of fellows, Office of Science, Technology and Innovation (2020).
- COVID-19 Areas of Research Interest. Expert consulted during The UK Parliamentary Office of Science and Technology Foresight exercise for facing the Covid-19 global pandemic (2020).

- Using Science for/in Diplomacy for Addressing Global Challenges (S4D4C). Expert consulted to support science diplomacy as a means to foster EU foreign policy goals and commitment to SDGs (2019).

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### **Experience in scientific, academic and other relevant organizations**

In addition to advising roles, Dr Rios Rojas has published widely on various topics demonstrating an interest and insight into the roles of science in society.

- Pathways to Linking Science and Policy in the Field of Global Risk. Report for the Centre for the Study of Existential Risk (UK, 2021)
- Foresight on Frontier Risks as part of the WEF Global Risk Report 2021 (Switzerland, 2021).
- Foresight: Science for Navigating Critical Transitions report produced by G20 Science Engagement group (S20) (Saudi Arabia, 2020).
- CSER Barriers to Impact Challenges and Recommendations. Internal report for managerial board, Centre for the Study of Existential Risk at the University of Cambridge (UK, 2020).
- First Report on Gender Equality. Agency for Environmental Assessment and Enforcement, Ministry of Environment (Peru, 2018).
- 3 scenarios for how bioengineering could change our world in 10 years World Economic Forum (2020).
- The Consequences of COVID-19: Deglobalisation, Mental Health, Climate Diplomacy, Digital Literacy and Strategic Foresight at the Geneva Centre for Security Policy (2020).
- From DIY editing to matchmaking by DNA: how human genomics is changing society. World Economic Forum (2019). Versions in English, Chinese and Spanish.
- Students need guidance in languages they speak. Nature (2018).

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### **Why is the nominee particularly suited to hold the proposed position?**

Dr Rios Rojas stands out in the GYA as a proactive and professional member, who competently takes on new roles, and can collaborate openly as well as demonstrate constructive leadership in diverse situations. She has an inherent ability to inspire others and works continuously for the success of the group or organisation she is serving, above all else. In her work and engagement on science advice in national, regional and international contexts, Dr Rios Rojas demonstrates an astute awareness of current and emerging issues in science as well as how these affect the science-society interface and what may be the policy-making consequences. Dr Rios Rojas has worked in the European context for many years, but continues to engage – within the GYA and beyond – to strengthen and advocate for the voice of science in her home country Peru, and across South and Central America. To the ISC

Governing Board, she would contribute rich experience in the field of science advice at a global level, insight into the state and developments of early-career researchers around the world, and a collaborative and committed approach.



## Alan Smeaton

Professor of Computing and Founding Director of Insight, Dublin City University



Nominator: **Royal Irish Academy**

Nationality: **Irish**

Country of residence: **Ireland**

Discipline: **Computer science**

Born in: **1959**

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### Motivational statement

*"I am eager and motivated for this important position because I regularly serve as a scientist in many international settings and a position on the Governing Board of the ISC would be a natural evolution and next step for me. Before the first COVID lockdown my last trip was to Amsterdam evaluating the disbursement of infrastructure awards for the NWO. Before that it was to NZ for interviews of applicant consortia for awards in Data Science. My roles on the COST Scientific Committee, my extensive international reviewing, are all roles that I find challenge me and interest me, and I believe I perform these roles well.*

*A couple of years ago several of my commitments came to an end at around the same time and for others I made a conscious decision to reduce them. This was because I felt I had contributed enough, I was afraid of going "stale" and the voices of others should be heard. Thus I stepped back from my Executive role in Insight, the 400-person research centre that I founded, and my tenures on the COST scientific committee, the Irish Research Council and the Royal Irish Academy Engineering and Computing Committee each reached their natural end. My role as Special Interest Group in Multimedia chair ended in 2021. I completed a term as Head of School at my University and I do not expect any other University roles and I am not putting myself forward for any, thus I am available.*

*Finally I believe I can make a difference not just because of my experience and background but because I bring balance. I was part of the process which saw the merger of two independent research councils in science and in humanities into the Irish Research Council more than a decade ago. I know that to solve the big problems and create sustainable new opportunities, we need natural and social sciences together. I may be more well-known for my work in technology but I also have a track record in digital humanities, and my Academy work shows I should not be pigeon-holed as a computing person. It is this combination of expertise and balance that leads me to believe I can make a difference."*

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## **Academic background**

Prof Smeaton holds the B.Sc., M.Sc. and PhD degrees in Computer Science from University College Dublin. He is a Fellow of the IEEE (Institute of Electrical and Electronics Engineers) and has several international prizes and accolades for his research work including the Mark Everingham prize, the Niwa-Takayanagi prize and the Strix award. He is a founding coordinator of TRECVID an International Benchmarking Evaluation Campaign on content access to digital video run by the National Institute of Standards and Technology (NIST, US) annually since 2001. He has supervised nearly 50 PhD students, almost all from Dublin City University but including formal PhD supervision at Universiti Kebangsaan Malaysia, University College Dublin and Trinity College Dublin. Prof Smeaton has been an external examiner for 42 PhD thesis worldwide in addition to several HDRs. His publications output and citation history makes him the second highest Computer Scientist in Ireland but if there is a single characteristic of his academic background that stands out, it is the degree of collaboration and the wide spread of areas in which he has worked. This is because computing, his area, is so ubiquitously transformational to so many areas and he thrives on being part of that.

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## **Past and current positions**

Prof Smeaton has been a Lecturer, Senior Lecturer then Professor at Dublin City University since he graduated in the late 1980s and moved to the University. He was appointed Professor of Computing in 1997. In the past he has been Head of School (twice), Executive Dean of Faculty, member of the University's Executive and member of various other academic committees in the university. He is a founding Director of the Insight Centre for Data Analytics which has 400 researchers across 4 Universities in Ireland and is the largest non-capital public research award ever given in Ireland. About 3 years ago he stepped back from his executive role in directing this in order to concentrate on his own teaching and research. Prof Smeaton is also a co-founder of the D-REAL Digitally Enhanced Reality CRT funded by Science Foundation Ireland with almost 110 fully funded PhD positions across 5 of Ireland's Universities.

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## **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

Prof Smeaton has been an elected member of the Royal Irish Academy for almost a decade, and during that time he served a 4-year term as Chair of the Academy's Engineering and Computing Committee. He has been a member of the Membership committee and chaired the IT Advisory Committee for 3 years. Prof Smeaton was also a winner of the Academy's Gold Medal in Engineering Sciences in 2015. He has used his Academy position to address important issues around the role and status of graduate students in Ireland. Prof Smeaton convened a 40-person, day-long event in March 2016, to examine the government's science strategy and how the objectives set out therein would affect PhD students, specifically within the engineering and computer science disciplines. This led to a report circulated widely in government and industry circles with 10 specific recommendations many of which are now adopted. In a similar vein, in 2017 he organised another Academy event leading to a report on career progression in Engineering and Computing, in academia and in industry. This addressed the poor retention and progression of early career women engineers and computer scientists.

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## **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

The ISC created recently as a merger between Science and Social Science Councils reaffirms that science is most effective and has greatest impact when it brings communities of scientists together. Scientists from within and across the natural and social science disciplines, need to work together to coordinate and address issues of global significance. Prof Smeaton's contribution to this would be his broad knowledge and his range of scientific research which is rooted in computing but has wide range and this can be seen from his research output. It is also illustrated by his wide range of collaborations. One of his colleagues recently estimated that he has more than 1,000 unique co-authors across his refereed papers on Google Scholar and that is no accident as by design, Prof Smeaton is a huge supporter of collaboration. Thus, apart from his experience in the various roles highlighted elsewhere in this submission, it is Prof Smeaton's breadth of expertise that makes him a suitable candidate for this nomination.

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## **Experience in scientific, academic and other relevant organizations**

Prof Smeaton was a board member of the Irish Research Council from 2012 to 2018, and also a board member of its predecessor (IRCSET), all of which were Ministerial appointments. In fact apart from the current Chair, Prof Ohlmeyer, he was the longest-ever serving Council board member. During his membership he was Ireland's liaison to the CHIST-ERA program which funds researchers in an EU-wide program. he was appointed a member of the inaugural COST (European Cooperation in Science and Technology) Scientific Committee (2015-2018), an EU program with a budget of €300m during Horizon 2020. Prof Smeaton does a lot of international reviewing for national research funding agencies in literally dozens of countries, and has done so for decades. He is the current chair of the ACM Special Interest Group on Multimedia (SIGMM). The Association of Computing Machinery (ACM) is the largest professional computing society in the world and SIGMM is one of its specialist groups. During his 4 years to date as chair he has introduced SIGMM sponsorship of new conferences, student travel awards and carer awards to attend SIGMM events, a new test of time best paper award and have been responsible for professional society oversight of more than 30 international conferences.

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## **Why is the nominee particularly suited to hold the proposed position?**

Science as a reliable and independent process for creating new knowledge has never been more important than now. The public consumption of scientific information has moved into mainstream and science is now news. The standout illustration is the pandemic where for topics like vaccine development, production, distribution and uptake, virus spread and prevention, tracking and tracing outbreaks, quarantining and lockdowns as forms of containment, virus mutations and their detection, for these topics the recurring and underpinning enabler is their science and their data. The use of computing for vaccine development, modelling the spread of the virus, evaluating the efficacy of different approaches to overcoming the virus, all of these and more depend on computing, and that's

just to do with the current pandemic. Computing is transformational in all areas in natural and social science and the underpinning nature of computing in these transformations will ensure this increases. With his background in computing, as a recognised innovator in the areas on which other aspects of science are depending – artificial intelligence, machine learning, data analytics – Prof Smeaton brings topicality and relevance as well as experience and enthusiasm to this position.

**Martin Visbeck**

Professor of Physical Oceanography, GEOMAR Helmholtz Centre for Ocean Research Kiel and Kiel University



Nominator: **German Research Foundation (DFG)**

Nationality: **German**

Country of residence: **Germany**

Discipline: **Oceanography**

Born in: **1963**

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**Motivational statement**

*“I am very excited, if elected, to continue to serve on the ISC governing board for a second term. Personally, I think ISC has accomplished a lot against the ambition to be the voice for science globally. In particular ISC has grown and assembles a wealth of experiences in areas of fundamental and integrated sciences, understood in the sense of the German word “Wissenschaften” that includes natural, life, social science as well as humanity. This broad expertise positions ISC to advance the discourse and international cooperation to address the key challenges of humanity in the context of environmental and human systems and their interaction. In the coming years the issue of regional or institutional engagement and membership growth needs to be addressed. ISC has demonstrated that new networks and scientific coalitions can be brought to the fore, digitalisation is an opportunity to advance science and its broader use, while on the other hand ISC is constantly advocating for the freedom, integrity, and universality of science. I will continue to support the ISC to advance its possibilities to engage with the UN processes and also to advance science literacy, the future of scholarly publication, open data and information exchange and multi stakeholder driven processes in the context of sustainable development and the 2030 Agenda.*

*I have enjoyed serving on the Governing Board of ISC and previously on ICSU’s CSPR and contributed significantly to the strategy, engagement with members and the interaction with large international science programs. I bring more than two decades of experience in working with a wide range of committees and my international career and international science profile has taught me to be respectful of other views, cultures and types of scientific inquiry. I am particularly eager to increase the diversity in science, and support capacity exchange activities.”*

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**Academic background**

Prof. Dr. Visbeck's research is concerned with ocean and climate variability and change and ocean sustainability. The current regional emphasis is the circulation of the Atlantic. Where his group maintains the world's longest direct current measurement series to document the variability of North Atlantic Deep Water transport in the Labrador Sea. In the context of a Kiel based collaborative research centers on climate-biogeochemical interactions in the tropical ocean his work focused on the supply of oxygen towards the extensive tropical oxygen minimum zones by diapycnal mixing and lateral eddy transfer. In his research on observations of ocean circulation and mixing he makes use of research vessel based expeditions but also is increasingly using and advancing modern robotic platforms including profiling floats and gliders, and the development of ocean observatories for long-term observations in the water column. He is spearheading new approaches to bring all ocean data and information together in form of a digital-twin of the ocean making use of innovative informatics and data science. Furthermore, he supports conceptual frameworks to advance integrated marine research in the context of ocean sustainable development at the regional and international level. He has contributed to ocean literacy projects and capacity building in Africa.

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## **Past and current positions**

### History of employment

- 1989-1993: PhD student, Kiel University, Germany; Prof. F. Schott
- 1994-1995: Postdoctoral fellow at MIT; Prof. J. Marshall
- 1995-2004: Associate Research Scientist, Lamont-Doherty Earth Observatory
- 1999-2004: Associate Professor, Department of Earth and Environmental Sciences, Columbia University, New York
- since 2004: Adjunct Senior Research Scientist Lamont-Doherty Earth Observatory
- since 2004: Professor at Kiel University and head of the research unit "Physical Oceanography" at GEOMAR Helmholtz Centre for Ocean Research Kiel (before 2012 IFM-GEOMAR)
- Other positions of responsibility
- 2007-2011: Deputy Director, Leibniz-Institute for Marine Science, Kiel, Germany

### International extended visits

- 1998-1999: four months at CSIRO Hobart, Australia
  - 2008: two months at Ocean University China, Qingdao, China
  - 2008-2009: three months at Atlantic Oceanographic & Meteorological Laboratory (NOAA) and Rosenstiel School of Marine & Atmospheric Science (University of Miami), USA
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## **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

Visbeck has supported the work of the Deutsche Forschungsgemeinschaft (German Research Foundation, DFG) in several capacities by being a member of several of its review and advisory committees. In particular he has supported the German engagement with WCRP and Future Earth over the last 15 years and was from 2013-2018 the Chair of the German Committee Future Earth and from 2017-2019 Co-Chair of the German Science Platform Sustainability 2030 (DFG and BMBF).

He has supported the DFG between 2012-2018 as a member of ICSU Committee on Scientific Planning and Review (CSPR) and is currently a member of the ISC Governing Board.

He has been representing the DFG in the European ICSU/ISC group and served for the last six years in their management team.

Moreover, since 2014 he is a member of the World Climate Research Programs Joint Scientific Committee (WCRP-JSC) which is co-sponsored by ISC. Since 2017 a Member of the Ocean Knowledge Action Network (KAN) development team sponsored by FutureEarth, WCRP, SCOR and IOC/UNESCO and since 2020 the ISC representative/member of the Research Board of the World Meteorological Organization (WMO).

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### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Visbeck serves on the interim Advisory Board to the UN Decade of Ocean Science for Sustainable Development (2021-202) and is the Past President of The Oceanography Society (2021-2023). He has served in the international CLIVAR project as chair of the Atlantic panel, and later Chair of the Scientific Steering committee for more than a decade before becoming a member and officer of the Joint Scientific Committee of WCRP (World Climate Research Programme) in 2014 until 2022. Since 2012 he has been a member of the leadership council of the SDSN (Sustainable Development Solutions Network). Between 2011-2013 he was a member of the ICSU Transition Team that initiated “Future Earth”. Between 2012-2019 he is a member of the ICSU Committee on Scientific Planning and Review and currently is a member of the ISC Governing Board and co-chair of the ISC committee on outreach and engagement. He has served on several organizational review panels (ESA, GCOS, etc.) and advisory boards (ESA-ACEO, Hadley Center Met-Office, UK; DWD Germany, etc.) and chaired many scientific conference committees.

Summarizing Visbeck’s scientific achievements as well as his engagement for climate and sustainability research and strong commitment to capacity and community building in different contexts, the DFG is very excited about nominating Visbeck as Ordinary Member of the ISC governing board. He has got extensive experience in working on cross-cutting issues and high commitment to science policy issues.

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### **Experience in scientific, academic and other relevant organizations**

Visbeck’s core research priorities are in the field of ocean and climate variability and change. His research is based on data collected from frequent expeditions on global research vessels; however, his



research group is taking increasing advantage of robotic platforms such as profiling floats and gliders and moored instrumentation. In addition, he has made extensive use of ocean and climate models, remote sensing and global data sets. More recently, he became interested in the ocean dimension of sustainable development and actively participated in the negotiations of the 2030 agenda and in particular in the establishment of the Ocean goal (SDG 14). He has frequently provided advice to government at the national, EU and UN level. Moreover, he is engaged in global ocean literacy projects such as the Ocean Sustainability MOOC, the Global Ocean Review Series and the Ocean-Atlas publication. He has supported African countries in ocean capacity building by orchestrating three expeditions with participants from Africa and Latin America. He has led a large Kiel based science cluster with 200 scientists with natural and social sciences backgrounds and an annual budget of 6 M € and was coordinating a large EU H2020 project (AtlantOS) with 21 M € and more than 60 partners in Europe, Canada, USA, Brazil and S. Africa. He is supporting a large number of scientific organizations as a member or chair of advisory or planning committees.

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### **Why is the nominee particularly suited to hold the proposed position?**

The DFG is convinced that Visbeck's expertise would substantially contribute to advancing the ISC and support the governing board to place it uniquely in the international institutional science policy landscape. The DFG nominates him for the election as an ordinary member of the governing board. This position requires a responsible and committed personality, and the DFG is convinced that Visbeck matches the position's requirement very well. As governing board member Visbeck could continue to support a wide range of issues that ISC will have to continue to address during these formative years.

**Nuri Yurdusev**

*Full Member/Professor of International Relations, Turkish Academy of Sciences/Middle East Technical University*



Nominator: **Turkish Academy of Sciences**

Nationality: **Turkish**

Country of residence: **Turkey**

Discipline: **Political sciences**

Born in: **1963**

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**Motivational statement**

*“In this age of accelerating globalization and increasing uniformity, the issue of freedom and responsibility of scientists has become more significant than ever. International Science Council, as arguably the most global science organization in the world, will be faced with a hard challenge in terms of defending the freedom of scientists and meeting the demands of the society. This requires a delicate balance between freedom of the scientists and science organizations and responsible practice of science vis-à-vis the society. If elected, I shall bring my expertise to contribute to the formation of that delicate balance.”*

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**Academic background**

- BSc in Political Science and Public Administration, (Middle East Technical University, Ankara, Turkey)
- MSc in International Relations (Middle East Technical University, Ankara, Turkey)
- PhD in Politics (University of Leicester, Leicester, United Kingdom)

Professor Yurdusev has conducted researches as visiting scholar at universities in United Kingdom and Japan. Over the years he has made significant contributions to the literature. He is indeed the first scholar who made a distinction between the level of analysis and unit of analysis in the discipline of International Relations. His conceptualization of civilisations as collective identifications within socio-historical process, defined as large-scale units of human identifications with mutual encounters and exchanges, has been a corrective to the infamous thesis of clash of civilisations. Again, he is the first

author who produced a book-length treatise on Ottoman diplomacy. Last but not least, he is the pioneer of European identity studies in Turkey.

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### **Past and current positions**

- 2020 – : Vice President of EMAN (Mediterranean Academic Network)
  - 2018 – : Member of Executive Board, Association of Academies and Societies of Sciences in Asia (AASSA).
  - January-July 2017 : Member of Transition Task Force, ISSC-ICSU
  - 2016 – : Fellow of the World Academy of Art and Science (WAAS).
  - 2015 – 2019 : Vice President of Turkish Academy of Sciences (TUBA).
  - 2012 – 2018 : Member of Academy Council, TUBA.
  - 2012 – : Full Member of Turkish Academy of Sciences.
  - 2007 – : Professor of International Relations, Middle East Technical University (METU), Ankara 06531, Turkey.
  - 2007-2013 : Member of Committee on Science Fellowships and Grants, Scientific and Technological Research Council of Turkey (TUBITAK).
  - March-June 2010 : Member of Committee of Evaluators within the 7th Framework Program, European Commission, Brussels.
  - June-August 2009 : Visiting Scholar, Kansai University, Osaka, Japan.
  - March-July 2003 : Senior Associate, St Antony's College, University of Oxford, UK.
  - Summer 1998 : Honorary Research Fellow of Politics, University of Leicester, UK.
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### **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

Professor Yurdusev's affiliation to TUBA began in early 2000 when he won the Academy's Post-Doctoral Research Fellowship. He was elected as a full member of TUBA in June 2012 and then elected to the Council of the Academy in December 2012. Having re-elected in 2015, he served as a Council member until January 2019. He was Vice-President of TUBA from January 2015 to January 2019. In addition, he served and still serving as head and member of various committees within the Academy, notably prize and membership committees. It is worth to mention that he initially proposed and designed TUBA Academy Prizes, which has now become an internationally acclaimed prize program. He has represented TUBA in various forums of inter-academy organizations such as IAP, ALLEA, AASSA, EMAN, ISSC, and International Human Rights Network of Academies and Scholarly Societies (IHRNASS). Professor Yurdusev is actively engaged in and committed to the activities of TUBA.

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### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Working for the Transition Task Force of ISSC and ICSU, participating in the foundational meetings held in OSLO and Taipei and thus having been actively engaged in the process of the establishment of the ISC, Professor Yurdusev has enough expertise in relation to the mission of the ISC and Governing Board. Professor Yurdusev, as a social scientist, will bring significant insights to International Science Council. Indeed, his argument that scientific knowledge is simultaneously explanatory, understanding and constitutive of reality broadens the horizons of science. He is fully supportive of the ISC's commitment to the idea of science as a global public good.

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### **Experience in scientific, academic and other relevant organizations**

Being a full member of TUBA and a Fellow of WAAS, serving as the Vice-President of TUBA for four years, having frequently been to various forums of scientific community including inter-academy organizations, working for the Transitional Task Force of ICSU and ISSC, and presently holding the positions for Vice-President of EMAN and Board membership of AASSA, Professor Yurdusev has enough experience for the management of science organizations. He has significantly contributed to the activities of inter-academy organizations such as AASSA, EMAN, ALLEA and IHRNASS. He organized and coordinated international conferences of AASSA and EMAN. He contributed to the international conferences of ALLEA and IHRNASS as speaker. Last but not least, he has been actively engaged in, and made significant contributions to, the works of TUBA and Middle East Technical University, his home university.

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### **Why is the nominee particularly suited to hold the proposed position?**

Professor Yurdusev is quite familiar with the structure and working of the ISC and its Governing Board. One of his academic research areas is the issue of human rights and humanitarian intervention in international relations. His familiarity with the ISC governing, being an expert in human rights and his commitment to the freedom of speech make him an aptitude candidate for an Ordinary member position of the ISC Governing Board.

## Yongguan Zhu

Science Director, Institute of Urban Environment, Chinese Academy of Sciences



Nominator: **China Association for Science and Technology**

Nationality: **Chinese**

Country of residence: **China**

Discipline: **Environmental biology**

Born in: **1967**

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### Motivational statement

*"I am a scientist in the broad field of environmental sciences, and currently serve as Science Director of the Institute of Urban Environment, CAS. Based on my innovative achievements in the environmental sciences, I have received many awards including the TWAS Prize and have been elected as an Academician of the CAS and a Fellow of the TWAS.*

*In the area of science planning, I have profound knowledge and systematic approaches with publication of more than 400 papers, several books, and over 31000 citations. I also act as a panel member for planning and assessment for the CAS and the Natural Science Foundation of China. Internationally, I have been a member of advisory committees for the International Atomic Energy Agency, FAO and WHO, regarding environmental pollution and its impact on health.*

*In terms of outreach and engagement, I have a global partnership network based on my international educational and employment background. I have held visiting professorships at leading universities including the University of Adelaide, Queen's University Belfast and Zhejiang University. I have chaired a number of international organizations and conferences, such as the International Union of Soil Science and the International Union of Radioecology. I hope to increase the engagement of various stakeholders in relevant work, and indeed establish more relationships between ISC and other global agencies and leaderships.*

*Furthermore, I have an awareness and understanding of global issues in both science itself and in the relationship between science and policy. I have made a variety of professional contributions related to policy making for soil pollution and environmental protection. I will also focus on the practice of science, and will contribute to translate research into resolutions and implementation plans.*

*I fully understand the responsibilities of Board membership, and will take active roles in ISC activities if I am elected.”*

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## **Academic background**

Yongguan Zhu is a senior scientist in environmental sciences and soil science, with research interests in environment health, environmental microbiology, and food system. He obtained his bachelor degree from Zhejiang Agricultural University in 1989, and his master degree from the Institute of Soil Science, Chinese Academy of Sciences in 1992. He holds a PhD in environmental biology from Imperial College, London (1998). Before returning to China in 2002, he was a Royal Society research fellow at Queen’s University in Belfast, UK, from 1994 to 1995, and was a research fellow at the University of Adelaide, Australia, from 1998 to 2002. Professor Zhu was elected as an Academician of the Chinese Academy of Sciences in 2019, and was elected as a Fellow of the World Academy of Sciences in 2020. From 2016 to 2020, he was named as one of the Highly Cited Researchers in the field of Environment and Ecology by Clarivate Analytics. He works on the biogeochemistry of nutrients, metals, and emerging pollutants (such as antibiotics and antibiotic resistance genes), and is a leader in taking multi-scale and multi-disciplinary approaches to soil and environmental problems.

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## **Past and current positions**

Professor Zhu is currently the Science Director of the Institute of Urban Environment (IUE), Chinese Academy of Sciences (CAS), and an Academician of CAS. In 2007, he was a visiting professor at the University of Adelaide. From 2002 to 2007, he was the head of the Department of Soil Environmental Science, the Research Centre for Eco-environmental Sciences, CAS. Professor Zhu is now serving as Editor-in-Chief of Environment International (Elsevier), and was Editor-in-Chief of Environmental Technology & Innovation (Elsevier) from 2013 to 2018. He is also a member of the editorial team for several other journals, such as Environmental Science and Pollution Research, Journal of Urban Health, and etc. Professor Zhu is founding member of SC for the ISC programme on Urban Health and Wellbeing, and was an advisory member for several international organizations, such as International Atomic Energy Agency.

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## **Affiliation to and/or current/past/future role within the nominating ISC Member organization**

Professor Zhu now is a member of the China National Commission for ISC (ISC-CHINA), which is established by China Association for Science and Technology (CAST) with a purpose of fulfilling its responsibilities as a member of the International Science Council (ISC), coordinating and playing the role of domestic natural and social sciences, and gathering institutes for exchange and cooperation.

Professor Zhu is in charge of the International Programme Office for the Urban Health and Wellbeing Programme (UHWB) under the ISC. CAST is a sponsor institute of the IPO.

In addition, Professor Zhu currently serves as the Vice President of the Soil Science Society of China

(SSSC) and the Executive Director of the Ecological Society of China (ESC). Both societies are organization members of CAST.

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### **Expertise, in relation to the mission of the ISC, the required range of qualities outlined in the call for nominations, and the role of the ISC Governing Board**

Professor Zhu is a scientist with interdisciplinary knowledge, focusing on major issues of global concern. His expertise is mainly in biogeochemistry and environmental microbiology. He has made a number of innovative achievements in the field of soil arsenic pollution and control mechanisms, soil antibiotic resistance gene pollution and transmission mechanisms, and microbial ecology. In recent years Professor Zhu has integrated his research on environmental pollution and health impacts under the framework of One Health. He has won many international and Chinese merit awards, including the TWAS Prize for Agricultural Sciences 2013, the Young Scientist Award (for environmental science) of SCOPE 2012, and the National Natural Science Award 2009, etc. He was awarded a Doctor of Science honoris causa from University of East Anglia, UK, and was elected as a member of European Academy of Sciences and Arts. Professor Zhu has published over 400 papers in international mainstream journals, such as Science, Nature, Nature Microbiology, Nature Plants, PNAS, and etc. and these publications have attracted over 31,000 citations (Web of Science) with an H-index of 92. He has also contributed to relevant policy documents at both international and national levels, such as FAO and WHO Food Standards Programme.

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### **Experience in scientific, academic and other relevant organizations**

Since 1998, Professor Zhu has frequently been invited to attend seminars and special courses by major universities all over the world, and has chaired a number of international conferences, such as the 16th International Conference on Urban Health in 2019, the 3rd International Conference on Soil Security and Planetary Health in 2018, the 2nd Global Soil Biodiversity Conference in 2017, and etc. In 2015, he was an invited panelist at the joint World Health Organization and British Embassy China Health Dialogue on Tackling Antimicrobial Resistance – China's Role in the Global Response. As a leader of the ISC programme on Urban Health and Wellbeing, he hosted several international symposiums, such as the International Symposium on Co-design for Urbanization in China and Asia-Pacific Region in 2015, and Modelling Urban Health and Wellbeing for Policy and Action: Science-Policy Dialogue in 2016. Professor Zhu has been a China National Committee Member of Future Earth since 2014, and joined the UCL-Nature Sustainability expert panel on science and the future of cities in 2017. He is the leading author of Towards 2050: Roadmaps of ecology and environmental sciences in China, Advancing health and wellbeing in the changing urban environment.

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### **Why is the nominee particularly suited to hold the proposed position?**

Professor Zhu is a scientist of vision, innovative achievement, and recognized experience. As an Academician of the CAS and a Fellow of the TWAS, he has unequivocal standing and scientific recognition, and plays a leading role in environmental and soil science. He will help to enhance the



status, accessibility, and impact of the ISC on global issues. He has been invited to make more than 50 keynote speeches and dialogues, and his research and publications have national and international influence, showing his appeal to members of the scientific and policy communities, private sectors and the public. Professor Zhu has been the Director of IUE, CAS for education and internationalization for over a decade, and has been involved in several international organizations working at the science-policy interface. He has great leadership and communication skills, as well as an understanding of emerging and current issues in the relationship between science and the regional and international agenda. With his educational background and invaluable networking skills, Professor Zhu has rich experience in international cooperation and advisory work for science planning. He is contributing to the ISC programme on UHWPB, and is helping to maintain a close relationship with ISC and its regional offices.