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The World Academy
of Sciences

Members Inducted in 2023



17th TWAS General Conference
29 September–2 October 2025
Rio de Janeiro, Brazil.

Members Inducted in 2023

TWAS Fellows elected 50 new members to the Academy effective in 2023:

- Itziar ARETXAGA (Mexico)
- Shireen Kamal Assem Abd El-Halim ASSEM (Egypt)
- Fabio BELLOT NORONHA (Brazil)
- Allan B. I. BERNARDO (the Philippines)
- Yonas BEYENE (Ethiopia)
- Patricia T. BOZZA (Brazil)
- Yaile CABALLERO MOTA (Cuba)
- Anirban CHAKRABORTI (India)
- Susana Ines CORDOBA DE TORRESI (Brazil)
- Elisabete Maria DE GOUVEIA DAL PINO (Brazil)
- Madhu DIKSHIT (India)
- Fayçal DJEFFAL (Algeria)
- DUAN Wenhui (China)
- Elfatih ELTAHIR (the United States of America)
- Mahmud FOTUHI-FIRUZABAD (Islamic Republic of Iran)
- Dionicia Baziliza GAMBOA VILELA (Peru)
- Anderson Stevens Leonidas GOMES (Brazil)
- GUO Zijian (China)
- HUANG Tingwen (China)
- HUNG Mien-Chie (Taiwan, China)
- Aini IDERIS (Malaysia)
- Jayaraj JAYARAMAN (Trinidad and Tobago)
- Yearul KABIR (Bangladesh)
- LI Jinsong (China)
- Paulo MAZZAFERA (Brazil)
- Maggy Ndombo Benteke MOMBA (South Africa)
- Partha Sarathi MUKHERJEE (India)
- Sultana Nurun NAHAR (the United States of America)
- Helena Judith NUSSENZVEIG LOPES (Brazil)
- Faith Hope Among'in OSIER (the United Kingdom of Great Britain and Northern Ireland)
- Bruce OVBIAGELE (the United States of America)
- Ashok PANDEY (India)
- Bijaya PANT (Nepal)
- PIAO Shilong (China)
- Dipendra PRASAD (India)
- Jurgenne Honculada PRIMAVERA (the Philippines)
- QIAO Jie (China)
- Kanchugarakoppal RANGAPPA (India)
- Valipe Ramgopal RAO (India)
- Mohammad SAL MOSLEHIAN (Islamic Republic of Iran)
- Rokia SANOGO (Mali)
- Celia SHAHNAZ (Bangladesh)
- Zabta Khan SHINWARI (Pakistan)
- Ramesh T SUBRAMANIAM (Malaysia)
- Marie-Anne VAN SLUYS (Brazil)
- Mohammad WASAY (Pakistan)
- YANG Cuihong (China)
- YANG Weicai (China)
- YE Xiangdong (China)
- ZHANG Yue (China)

This publication incorporates information received from TWAS Fellows as of 16 August 2025. Updates received thereafter are reflected in TWAS Directory of Fellows and Young Affiliates only [twas.org/directory].

Itziar ARETXAGA

Instituto Nacional de Astrofísica, Óptica y Electrónica
San Andrés Cholula, Puebla, México

Membership Section 09. Physics, Astronomy & Space Sciences

Born in Bilbao, Spain, on 20 November 1965.

Aretxaga is a class-C researcher at the National Institute of Astrophysics, Optics and Electronics (INAOE), Mexico, a member of the Mexican National Researcher System (equivalent to full professor), and a member of the Mexican Academy of Sciences (AMC). Since her arrival in Mexico in 1998, she has built her research group on galaxy formation and evolution and contributed to the development of the astronomy community. In 2011–2016 she was Head of Department of Astrophysics at INAOE. In 2006–2013, she coordinated the astronomy section of AMC. Since 2016, she has directed the International Schools for Young Astronomers of the International Astronomical Union, that bring education, development and networking opportunities to graduate students in isolated areas. The main focus of her research is to unravel the importance of massive star formation around supermassive black holes and their role in galaxy formation and evolution. She has coauthored over 140 research papers in Q1 journals, and has been invited more than 100 times to international conferences and other research institutes as a speaker. She also has an active outreach programme of talks, articles and pieces in social media.



Shireen Kamal Assem Abd El-Halim ASSEM

Agricultural Research Center (ARC)
Giza, Cairo, Egypt

Membership Section 01. Agriculture, Nutrition & Food Systems Sciences

Born in Giza, Cairo, Egypt, on 25 April 1965.

Assem is vice-president of the Agricultural Research Center in Egypt. She was the former director of the Agricultural Biotechnology and Genetic Engineering Research Institute (ARC). She is specialized in plant molecular biology and biotechnology. She visited and exchanged her experiences as a visiting scientist at several universities and biotech companies in the United States of America (USA). Assem is a member of the African Union High Level Panel on Emerging Technologies and the former vice-chair of the Genetic Sciences National Committee of the Egyptian Academy of Science and Technology, Egypt. She is a Fulbright Alumnus, USA (2002–2003). Assem is a member of the Board of Directors of the Biotechnology Programme, Faculty of Agriculture, Banha University, Egypt. She was a team leader for one of the groups updating the Sustainable Agricultural Development Strategy (2019) of the Ministry of Agriculture and Land Reclamation, Egypt, and she received the 2017 Food and Agriculture Organization Prize. She participated in several basic and applied national and international research projects, she has several publications in peer-reviewed journals, and is a reviewer for some national and international funding schemes.



Fabio BELLOT NORONHA

National Institute of Technology
Rio de Janeiro, Brazil

Membership Section 05. Engineering

Born in Niterói (RJ), Brazil, on 19 May 1963.

Bellot Noronha received his Bachelor of Science degree from the Federal University of Rio de Janeiro (UFRJ) in 1987, Master of Science degree in 1989, from the Alberto Luiz Coimbra Institute for Graduate Studies and Research in Engineering (COPPE)-UFRJ, and PhD degree in 1994 from COPPE-UFRJ and Institut de Recherches sur la Catalyse, Lyon, France. In 1996, he joined the catalysis group of the National Institute of Technology, Brazil. He worked in a postdoctoral position with Daniel Resasco at Oklahoma University from 1999 to 2000. He has been a visiting professor in a research chair at the Ecole Centrale de Lille in the Biomass Valorisation Group at Unité de Catalyse et de Chimie du Solide since 2019. He is a category 1A researcher of the Brazilian National Council for Scientific and Technological Development (CNPq), and a researcher of the Foundation for Research Support of the State of Rio de Janeiro (FAPERJ), Brazil. Since 2008, he has been one of the Brazilian representatives on the International Association of Catalysis Societies. In 2021, he was elected to the Brazilian Academy of Sciences.



Allan B. I. BERNARDO

De La Salle University
Manila, the Philippines

Membership Section 10. Economic & Social Sciences, Humanities & Arts

Born in Metro Manila, the Philippines, on 25 March 1967.

Bernardo, who received his PhD in 1992 from Yale University, United States of America (USA), is distinguished university professor and university fellow, De La Salle University, the Philippines. His research relates to polyculturalism and intercultural relations, hope and well-being, socioeconomic and other social inequalities, and sociocultural aspects of learning and achievement. He was president, Asian Association of Social Psychology; president, ASEAN Regional Union of Psychological Societies; president, Psychological Association of the Philippines; chair, Philippine Social Science Council; Editor, *Asian Journal of Social Psychology*; an editor, *The Asia-Pacific Education Researcher*. Presently, he is member of the Executive Committee, International Union of Psychological Science. He received: International Prize for Literacy Research (UNESCO Institute for Education); Spencer Fellowship (National Academy of Education, USA); Fulbright Advanced Research Fellowship. In the Philippines, he received: Achievement Award (National Research Council of the Philippines), Outstanding Psychologist (Psychological Association of the Philippines). Bernardo is an elected member of the National Academy of Science and Technology, Philippines, and a Fellow of the Asian Association of Social Psychology.



Yonas BEYENE

French Center for Ethiopian Studies (CFEE)
Addis Ababa, Ethiopia



Membership Section 02. Biological Sciences

Born in Gore, Illubabor, Ethiopia, on 6 October 1956.

Beyene earned his PhD in prehistory in 1992 from the Muséum national d'Histoire naturelle, Paris, France. He is researcher at the Ethiopian Heritage Authority and affiliated with the French Center for Ethiopian Studies in Addis Ababa, Ethiopia. Beyene is Fellow of the Ethiopian Academy of Sciences, and an international member of the American Academy of Sciences. He is recipient of the Order of Academic Palms from the French Ministry of Education, France. He is corresponding member of the Institut de paléontologie humaine (Paris, France) and of the Center for Academic Research and Training in Anthropogeny (CARTA), University of San Diego, United States of America. He is actively leading and co-leading paleoanthropological research programmes in Ethiopia. He represented Ethiopia in the World Heritage Committee at the United Nations Educational, Scientific and Cultural Organization (UNESCO) between 2009 and 2012. He initiated and prepared the nomination file for the Konso Cultural Landscape on UNESCO's World Heritage list (nominated in 2011). He also led the field research and preparation of the dossier for the nomination of the Gedeo Cultural Landscape for UNESCO's World Heritage List.

Patricia T. BOZZA

Instituto Oswaldo Cruz, Fundação Oswaldo Cruz (FIOCRUZ)
Lab Imunofarmacologia
Rio de Janeiro, Brazil



Membership Section 03. Medical & Health Sciences

Born in Rio de Janeiro, Brazil, on 7 March 1967.

Bozza is a senior investigator and head of Laboratory of Immunopharmacology at Oswaldo Cruz Institute, Fundação Oswaldo Cruz (FIOCRUZ), Brazil. She got her Medical Doctor degree from the State University of Rio de Janeiro, and her PhD in cellular and molecular biology from the Oswaldo Cruz Institute, Brazil. She received postdoctoral training under Peter Weller at Harvard Medical School as Pew Latin American Fellow. Bozza is a senior scholar of the Brazilian National Council for Scientific and Technological Development (CNPq) and a member of the Brazilian Academy of Science. She has mentored the work of 24 postdoctoral, 29 PhD and 30 master's degree students. Her group's long-term goal is to conduct translational studies that contribute new knowledge on the interplay of metabolic and inflammatory mechanisms in the pathogenesis of emergent and/or severe infectious diseases, aiming at identifying biomarkers and therapeutic targets, including dengue, Zika and COVID-19. In response to the COVID-19 emergency, her group characterized mechanisms involved in thromboinflammation and hypercoagulability in severe COVID-19 patients, and contributed to defining immunometabolic mechanisms involved in infection.

Yaile CABALLERO MOTA

Universidad de Camagüey
Ignacio Agramonte, Camagüey, Cuba

Membership Section 06. Information and Data Sciences & Technologies

Born in Camagüey, Cuba, on 13 May 1978.

Caballero Mota received more than 105 awards and distinctions: Finlay Order; 10 Cuban Academy of Sciences Awards; TWAS Regional Partner's Award for Young Scientists (Computer Science) awarded by the Cuban Academy of Sciences; Distinguished Foreign Expert Award in the 100 foreign experts plan from Hebei province, China; Distinguished Researcher of Hebei International Studies University, China; Sofia Kovalevskaya Award; 5 Special Distinctions by Cuban Ministers; National Award for Young Researcher in the Category of Technical Sciences; Pablo Miquel National Prize from the Cuban Society of Mathematics and Computing; National Vanguard of the Science Union; several National Prizes awarded by the Youth Technical Brigades, 20 provincial CITMA Awards, among others. She has participated in more than 200 congresses worldwide. She has over 140 scientific publications, several of them within the Web of Science and referenced databases. She participated in more than 30 research and development projects and has 33 software registrations in her name at the Cuban Copyright Center. 33 diploma projects, 64 master's theses, and 10 doctoral theses have been defended under her tutorship.



Anirban CHAKRABORTI

Jawaharlal Nehru University
New Delhi, India

Membership Section 10. Economic & Social Sciences, Humanities & Arts

Born in Darjeeling, India, on 10 February 1975.

Chakraborti (PhD, Saha Institute of Nuclear Physics, Jadavpur University, India, 2003; and Habilitation à Diriger des Recherches, Université Pierre et Marie Curie, France, 2013) is professor, Jawaharlal Nehru University, India. He was: registrar, Jawaharlal Nehru University (JNU); dean, School of Computational and Integrative Sciences, JNU; dean of research and development, BML Munjal University, India; professor, chair of quantitative finance, Ecole Centrale Paris, France (now CentraleSupélec); lecturer in theoretical physics, Banaras Hindu University, India. He had postdoctoral tenures at Brookhaven National Laboratory, United States of America, and Helsinki University of Technology, Finland (now Aalto University). He is founding member, Center for Complexity Economics, Applied Spirituality and Public Policy, Jindal School of Government and Public Policy, OP Jindal Global University, India; International Member, Centro Internacional de Ciencias A.C., Cuernavaca, Mexico; council member of Centre for Quantum Social and Cognitive Science, Memorial University, Canada. He was awarded the Young Scientist Medal of the Indian National Science Academy (2009) for work in econophysics.



Susana Ines CORDOBA DE TORRESI

Universidade de São Paulo
Cidade Universitária, São Paulo, Brazil

Membership Section 04. Chemical Sciences

Born in Cordoba, Argentina, on 11 July 1961.

Cordoba De Torresi is professor, Institute of Chemistry of the University of São Paulo (USP). She graduated in chemistry (1983) and got her PhD (1988) at the Universidad Nacional de Córdoba, Argentina, working with electrochemistry, spectroscopy and materials science. After a postdoctoral internship at Université Pierre et Marie Curie, National Centre for Scientific Research, France (1988–1990), she moved to Brazil as a researcher at State University of Campinas and Federal University of São Carlos. She joined the Institute of Chemistry, USP in 1996, and became a full professor in 2006. She has served as president of the Undergraduate and Graduate Commissions and vice-provost of research of USP. Her main interests are research on electrochromism, chemical sensors and electrocatalysis enhanced by plasmonics. She received: Tajima Prize from the International Society of Electrochemistry; National Order of Scientific Merit, Commander category, from the Presidency of the Republic; American Chemical Society Award for Brazilian Women in Chemistry, Scientific Leader category. She is a Member of the Brazilian Academy of Sciences and of the Academy of Sciences of the State of São Paulo.



Elisabete Maria DE GOUVEIA DAL PINO

Universidade de São Paulo
Instituto de Astronomia, Geofísica e Ciências Atmosféricas
Cidade Universitária, São Paulo, Brazil

Membership Section 09. Physics, Astronomy & Space Sciences

Born in São Paulo, Brazil, on 7 April 1958.

De Gouveia Dal Pino (PhD in astronomy, University of São Paulo, 1989) is full professor, Department of Astronomy, Institute of Astronomy, Geophysics, and Atmospheric Sciences, University of São Paulo (IAG-USP), Brazil. She had postdoctoral affiliation at Harvard University (1991–1993), and was associated researcher at International Centre for Theoretical Physics, Italy (1994–2001). She introduced in Brazil high-performance magnetohydrodynamic (MHD) numerical simulations to model astrophysical sources: from solar interior, star formation regions, jets and black holes, to galaxy clusters. She has pioneering studies on MHD turbulence, magnetic reconnection, and cosmic ray acceleration in magnetized systems. She is Brazilian principal investigator of the largest gamma-ray observatory in construction, the Cherenkov Telescope Array (CTA), and of ASTRI Mini-Array—precursor of CTA. She is Member of the Brazilian Academy of Sciences and the Brazilian Astronomical Society. She was awarded the Claudia Prize of Woman in Science (2017), and holds the Jabuti Award for Best Scientific Book (2001). She supervised PhD thesis with national honors and Best Theses in Astronomy of IAG-USP.



Madhu DIKSHIT

CSIR-Central Drug Research Institute
Lucknow, Uttar Pradesh, India

Membership Section 03. Medical & Health Sciences

Born in Bahraich, Uttar Pradesh, India, on 21 November 1957.

Dikshit has made significant contributions to molecular pharmacology with special emphasis on redox/NO biology and metabolism. In the area of neutrophil biology she enhanced our understanding of how nitric oxide modulates neutrophil differentiation, survival, free radical generation, NETosis, chemotaxis, and microbicidal activity. She has investigated the role of iNOS in metabolic regulations and insulin sensitivity. She led the anti-thrombotic drug discovery team at Central Drug Research Institute, and one of their new chemical entities has received permission for phase I clinical trial in India. She initiated a programme on drug and biomarker discovery in the area of fatty liver disease at the Translational Health Science and Technology Institute, with significant contributions. During the COVID-19 pandemic, under a joint project of Department of Biotechnology and Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH), she undertook preclinical and pharmacokinetic evaluations of AYUSH herbal formulations for mitigating SARS-CoV2 and associated pathologies. Dikshit has published 200+ papers, 23 reviews, and 8 patents, edited 3 books, and has supervised 37 PhD and 10 MD theses.



Fayçal DJEFFAL

Department of Electronics, Faculty of Technology
University of Batna-2
Batna, Algeria

Membership Section 05. Engineering

Born in Batna, Algeria, on 10 December 1975.

Djeffal is professor, University of Batna-2, Batna, Algeria. His contributions to materials science, solid-state devices and artificial intelligence (AI) have gained substantial research acclaim in the field of electronic device modeling and fabrication, specifically in the area of development of new high-performance and low cost microelectronic devices for renewable energy and environmental sensing applications, as evidenced by the number of citations for his published papers in a short span of time. In the context of microelectronic devices for renewable energy and environmental sensing applications, Djeffal has successfully developed new approaches and design techniques of microelectronic devices using soft-computing and AI-based methods. These approaches are now widely used by several scientific centers. He has published more than 300 journal articles and conference papers and is the author of some books and book-chapters in the field of photovoltaic devices/environmental sensors and soft-computing. Member of the African Academy of Sciences (AAS), he has received the Shoman Award for Arab Researchers, the Africa Award for Young Researchers and the Microsoft-TWAS-AAS Award, among others.



DUAN Wenhui

Department of Physics
Tsinghua University
Beijing, China



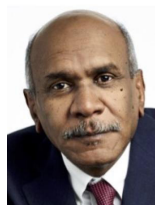
Membership Section 09. Physics, Astronomy & Space Sciences

Born in Hunan, China, on 14 January 1967.

Duan (PhD, 1992, Tsinghua University, China) is a chair professor at Tsinghua University where he currently serves as dean of the School of Sciences and chair of the Department of Physics. He is the president of the Chinese Society of Micro-Nano Technology, vice-president of the Chinese Materials Research Society, and Executive Council member of the Chinese Physical Society. His research in theoretical and computational condensed matter physics and materials science mainly focuses on the exploration of novel quantum physics, and theoretical prediction and design of new materials and devices using theoretical and first-principles approaches. He has published more than 400 papers in peer-reviewed journals. He is an editorial board member of several international peer-reviewed journals, including *Physical Review B*, *Computational Materials Science*, *npj Computational Materials*, *Science China, Research*, and *The Innovation*. He is a member of the Chinese Academy of Sciences, and a Fellow of the American Physical Society.

Elfatih ELTAHIR

Massachusetts Institute of Technology (MIT)
Cambridge, MA, Unites States of America



Membership Section 07. Earth, Climate & Environmental Sciences

Born in Omdurman, the Sudan, on 30 October 1961.

Eltahir is H. M. King Bhumibol professor of hydrology and climate, and professor of civil and environmental engineering at the Massachusetts Institute of Technology (MIT), Unites States of America (USA). Eltahir made significant contributions defining the role of land surface processes in climate system. He has been actively engaged in projecting future impacts of global climate change at local and regional scales, with the objective of informing and hence enabling proactive adaptation by local communities. Examples for topics of his projections include: water in Nile basin, malaria in Africa, droughts over Mediterranean, and extreme heatwaves in Asia. Eltahir is the director of the UM6P-MIT Research Program at MIT with a focus on sustainable development in Africa. He is also the lead principal investigator in a large Climate Grand Challenges Project at MIT with the goal of reinventing adaptation to climate change. He was recently elected member of USA National Academy of Engineering. Eltahir is a recipient of the Kuwait Prize in Applied Science in 2000, an elected Fellow of the American Geophysical Union (AGU) in 2008, and a recipient of the Hydrologic Sciences Award in 2017, from AGU.

Mahmud FOTUHI-FIRUZABAD

Sharif University of Technology
Tehran, Islamic Republic of Iran



Membership Section 05. Engineering

Born in Yazd, Islamic Republic of Iran, on 29 December 1959.

Fotuhi-Firuzabad obtained his Bachelor of Science and Master of Science (MSc) degrees in electrical engineering from Sharif University of Technology and Tehran University in 1986 and 1989 respectively, and MSc and PhD degrees in electrical engineering from the University of Saskatchewan, Canada, in 1993 and 1997 respectively. He is a professor of electrical engineering at Sharif University of Technology, Tehran, Islamic Republic of Iran. His research interests include power system reliability, distributed renewable generation, demand response and smart grids. His scientific activities include more than 700 papers, and supervising more than 130 master's and doctoral theses. He is the recipient of several national and international awards including: World Intellectual Property Organization Award for the Outstanding Inventor (2003), and Probabilistic Methods Applied to Power Systems (PMAPS) International Society Merit Award (2016). Fotuhi-Firuzabad is a visiting professor at Aalto University, Finland. He serves as the editor-in-chief of *IEEE Transactions on Smart Grid* from November 2024. He is a Fellow of the Institute of Electrical and Electronics Engineers (IEEE) (2014) and Associate Fellow of the Iran National Academy of Science.

Dionicia Baziliza GAMBOA VILELA

Universidad Peruana Cayetano Heredia
Lima, Peru



Membership Section 03. Medical & Health Sciences

Born in Chiclayo-Lambayeque, Peru, on 16 May 1972.

Gamboa Vilela (PhD, 2008, Institute of Tropical Medicine in Antwerp, Belgium, and University of Maastricht, Kingdom of the Netherlands) is professor at the Department of Cellular and Molecular Sciences, Faculty of Science and Engineering (FACI), Universidad Peruana Cayetano Heredia (UPCH), and member of the Institute of Tropical Medicine Alexander Von Humboldt (IMTA VH-UPCH). She is the director of the Laboratory Malaria: Parasites and Vectors. Her group carries out multidisciplinary studies about the malaria transmission dynamics in the Peruvian Amazon region. She has published more than 100 original articles, and has supervised 40 under and postgraduate students who have graduated with a thesis in her lab. She has been a member of the Organization for Women in Science for the Developing World (OWSD) since 1996. She received the L'Oréal-UNESCO Fellowship in 2003, the OWSD-Elsevier Foundation Award for Latin America & Caribbean (2013), and the L'Oréal-UNESCO-CONCYTEC-ANC National Award For Women in Science, Peru, in 2015. She is a member of the American Society of Tropical Medicine and Hygiene and since 2013, she is member of the Peruvian National Academy of Science (ANC).

Anderson Stevens Leonidas GOMES

Universidade Federal de Pernambuco
Physics Department
Cidade Universitaria, Recife, PE, Brazil



Membership Section 09. Physics, Astronomy & Space Sciences

Born in Recife, PE, Brazil, on 2 December 1956.

Gomes (PhD in physics, Imperial College of Science, Technology and Medicine, United Kingdom of Great Britain and Northern Ireland, 1986) is a full professor at the Physics Department, Universidade Federal de Pernambuco, Brazil. He had a postdoctoral affiliation at Brown University, United States of America (1991–1992). His scientific activities are in the areas of nanophotonics, biophotonics, non-linear optics and optical communications. His main contributions in those areas include optical coherence tomography applied to dentistry, nonlinear optics techniques employed to study bulk and nanomaterials, optical fibre nonlinearities, optical fibre amplifiers and random lasers/random fiber lasers. He is a member of the Brazilian Academy of Science, Fellow of Optica (formerli OSA, Optical Society of America), member and Council member of the Brazilian Society for the Progress of Science, and has been awarded the National Order of Scientific Merit, class Commander in the area of physical sciences (Presidential Decree of 27 December 2010). He served as secretary of state for science, technology and environment of Pernambuco (2010), and was secretary of education of Pernambuco (2011–2012).

GUO Zijian

Nanjing University
Nanjing, China



Membership Section 04. Chemical Sciences

Born in Hebei, China, on 20 October 1961.

Guo (PhD, 1994, University of Padua, Italy) is a professor of chemistry at the School of Chemistry and Chemical Engineering of Nanjing University, China. He holds Changjiang chair professorship of Ministry of Education, and is past director of the State Key Laboratory of Coordination Chemistry; past dean of the School of Chemistry and Chemical Engineering; founding director of the Chemistry and Biomedicine Innovation Center of Nanjing University. His prizes include Outstanding Achievement Award of the Asian Society of Biological Inorganic Chemistry, Luigi Sacconi Medal of the Italian Chemical Society, and the first prize in science and technology of the Ministry of Education of China. He is a member of the Chinese Academy of Sciences. As a leading scientist in coordination chemistry, particularly in bioinorganic chemistry, he has made major contributions in bioinorganic sensing and metal-based anticancer agents. He developed a series of fluorescent sensors to reveal the intracellular distribution and metabolism of essential metals. He also explored the potential for rational design of non-classic platinum-based complexes and smart delivery of clinical drugs.

HUANG Tingwen

Shenzhen University of Advanced Technology
Shenzhen, China

Membership Section 06. Information and Data Sciences & Technologies

Born in Chongqing, China, on 28 January 1967.

Professor Huang has made fundamental contributions to dynamics of nonlinear systems, neuromorphic computing, intelligent control and smart grid. He was named Highly Cited Researcher by Clarivate Analytics in 2019, and was a distinguished lecturer of the Institute of Electrical and Electronics Engineers (IEEE) Computational Intelligence Society 2022-2024. He is on the Stanford/Elsevier Top 2% Scientists List, and on the top 0.5% of scientists list for lifetime and the most recent five years both by ScholarGPS. He received the Outstanding Achievement Award from Asia Pacific Neural Networks Society, the Changjiang chair professorship awarded by China's Ministry of Education, the Best Research Project Award presented by Qatar National Research Fund, and The Association of Former Students Distinguished Achievement Award for Research, the highest honor bestowed by Texas A&M University to its faculty. He is a Fellow of the Asia-Pacific Artificial Intelligence Association (AAIA), IEEE, International Association for Pattern Recognition, an academician of the International Academy for Systems and Cybernetic Sciences, and a Member of the European Academy of Sciences.



HUNG Mien-Chie

China Medical University
Taichung, Taiwan, China

Membership Section 03. Medical & Health Sciences

Born in Kaohsiung, Taiwan, China, on 4 September 1950.

Hung, PhD, is president for China Medical University in Taiwan, China. He was vice-president for basic research and professor and chair of the Department of Molecular and Cellular Oncology at the MD Anderson Cancer Center, The University of Texas. Hung is a basic scientist with a keen translational vision and especially his recent research effort has significantly contributed to understanding the biology of cancer and to developing combinational cancer therapies to overcome resistance. Up to date, Hung has published more than 679 peer-reviewed articles, of which over 194 were published in journals with impact factor 10 or above. His lifetime h-index reaches to 177 (Google Scholar). He is one of the members of the selection committee for Tang Prize in Biopharmaceutical Science category, and is one of the founding editorial members for *Cancer Cell* (2002–2020). He serves in the advisory board or as editor for *Molecular Cell*, *Cancer Research*, *Cancer and Metastasis Reviews*, *Molecular Carcinogenesis*, *Cancer Letters*, *Journal of Clinical Investigation*, etc. He recently received the Japanese Cancer Association International Award (2023) and the Cell and Cancer Research Elite Award from the Pan Pacific Symposium on Stem Cells and Cancer Research (2024).



Aini IDERIS

International Medical University (IMU University)
Kuala Lumpur, Malaysia

Membership Section 01. Agriculture, Nutrition & Food Systems Sciences

Born in Kelantan, Malaysia, on 23 March 1953.

Ideris, a renowned scientist in avian medicine, pioneered animal vaccines development in Malaysia. Her research interest is in avian respiratory and immunosuppressive diseases. She plays an instrumental role in advancing efforts towards food security and sustainable food production in developing countries. As a distinguished scientist, Ideris was elected to various fellowships, such as, Senior Fellow of Academy of Sciences Malaysia, Fellow of Islamic World Academy of Sciences, Founding Fellow of Malaysian College of Veterinary Specialists, Fellow of Malaysian Scientific Association, and also elected as an inaugural member hall of honour of World Veterinary Poultry Association, for her contributions in scientific research and outstanding leadership. Ideris has won various national and international awards. She sits on various councils. She has a wealth of experience in administration as well as an educator. She was the eighth vice-chancellor of Universiti Putra Malaysia (2016–2020) and is currently the pro-chancellor of the International Medical University, since 2021. She has also been a Council member of UCSI University since 2024.



Jayaraj JAYARAMAN

The University of the West Indies
Department of Life Sciences, Faculty of Science and Technology
St. Augustine, Trinidad and Tobago

Membership Section 01. Agriculture, Nutrition & Food Systems Sciences

Born in Vallampadugai, India, on 4 May 1965.

Jayaraman is a biotechnology and plant-microbiology professor at The University of the West Indies (UWI), Trinidad and Tobago (TT). He has completed over 25 funded research projects and published over 125 refereed publications. He has received several awards including UNDP-CARUTA Research Award; UWI Vice-Chancellor's Excellence Award for Outstanding Research Accomplishments; Accreditation Council of Trinidad and Tobago Award, Government of TT for Outstanding Achievements in Applied and Academic Research; and Environmental Management Authority-TT- Greenleaf Award. He was awarded a BOYSCAST fellowship (Better Opportunities for Young Scientists in Chosen Areas of Science and Technology) by the Department of Science & Technology of India, and is an elected Fellow of the Indian Phytopathological Society. He served as advisor to the United Nations University Biotechnology Programme for Latin America and the Caribbean. He serves as plant protection advisor to programmes for several Caribbean states. A lead trainer for integrated disease/pest management (IDM/IPM) techniques for the Caribbean region, his research projects cover diverse topics focussing on sustainable agriculture, including biological control, disease diagnostics, plant-microbe interactions, elicitor-biomolecules, induced disease resistance, seaweed-based products, genetic engineering of plants for biotic stress tolerance, etc.



Yearul KABIR

Department of Biochemistry & Molecular Biology
University of Dhaka
Dhaka, Bangladesh



Membership Section 03. Medical & Health Sciences

Born in Kishoreganj, Bangladesh, on 8 January 1958.

Kabir earned his Master of Science in biochemistry in 1983 from the Department of Biochemistry and Molecular Biology (BMB), University of Dhaka (DU), Bangladesh and his PhD in nutritional biochemistry in 1990 from the Laboratory of Nutrition, Department of Applied Biological Chemistry, Faculty of Agriculture, Tohoku University, Japan. He then held a postdoctoral position under a joint fellowship with the United Nations University and the Japan Society for the Promotion of Science (JSPS) at the National Food Research Institute, Tsukuba, Japan (April 1994–April 1995). He was a professor at BMB, DU from December 1997 to January 2023, when he retired. Previously he was associate professor in the Department of Food Science and Nutrition, College of Life Sciences, Kuwait University, Kuwait (September 2004–June 2009, on leave from DU). At BMB, DU he was associate professor (December 1991–December 1997), assistant professor (April 1990–December 1991), and lecturer (April 1984–March 1990). He was a visiting scientist as a JSPS Fellow at Tohoku University, Japan (December 2003–May 2004); and at the Federal Research Institute of Nutrition and Food, Karlsruhe, Germany (August 1998–March 1999).

Li Jinsong

Shanghai Institute of Biochemistry and Cell Biology
Center for Excellence in Molecular Cell Science, CAS
Yueyangroad, Xuhui District, Shanghai, China



Membership Section 02. Biological Sciences

Born in Nanchang, Jiangxi, China, on 14 October 1971.

Li obtained his PhD degree from Institute of Zoology, Chinese Academy of Sciences followed by postdoctoral training at Rockefeller University before joining Shanghai Institute of Biochemistry and Cell Biology in 2007. His research mainly focuses on stem cells and embryonic development. He has made fundamental contributions to the establishment of androgenetic haploid embryonic stem cells (also termed sperm-like stem cells or artificial spermatids) that can be used as sperm replacement for efficient production of semi-cloned mice (so called SC technology). Li has made great efforts to promote the applications of SC technology and shown that it can be used for complex genetic analyses in mice, including efficient generation of mouse models carrying defined point mutations related to human developmental defects; one-step generation mouse models that mimic multiple genetic defects in diseases; and targeted screening of critical genes or nucleotides of a specific gene involved in a developmental process. Recently, Li initiated a project to tag every protein in mice based on SC technology (genome tagging project), which may enable the precise description of protein atlas in mice.

Paulo MAZZAFERA

State University of Campinas
Department of Plant Biology, Institute of Biology
Campinas, SP, Brazil



Membership Section 01. Agriculture, Nutrition & Food Systems Sciences

Born in Florai (PR), Brazil, on 25 January 1961.

Mazzafera is a full professor at the University of Campinas (Unicamp), São Paulo, Brazil. He graduated in agronomy and his main knowledge area is plant physiology. He started his career at Agronomic Institute of Campinas, working with coffee, a crop that is still his passion. He teaches plant physiology/biochemistry in undergraduate and graduate courses and supervised more than 120 master's, PhD and postdoctoral students. Nowadays, his main research areas are lignin metabolism and crop nutrition in coffee, sugarcane, soybean and eucalyptus. He published over 300 refereed scientific articles, book chapters, and technical publications. During his career, he had intense administrative activity. He was head of department at Unicamp twice (1997–2003), director of the Institute of Biology (2006–2010), advisor to the dean of research (2003–2006), advisor to the rector (2011–2013) and director of the National Laboratory of Bioethanol Science and Technology (CTBE) (1985–1986). He is a member of the Brazilian Academy of Sciences and of the Academy of Sciences of São Paulo. He is a level 1A researcher at the Brazilian National Council for Scientific and Technological Development (CNPq).

Maggy Ndombo Benteke MOMBA

Tshwane University of Technology
Faculty of Science
Department of Environmental, Water and Earth Science
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Membership Section 02. Biological Sciences

Born in Bikoro, Équateur, the Democratic Republic of the Congo, on 9 October 1958.

Momba is a citizen of the Democratic Republic of the Congo living in South Africa since 1991. She is a full research professor and holds the South African National Research Chair of Water Quality and Wastewater Management at Tshwane University of Technology. Her core research in these areas includes drinking water treatment, industrial wastewater and municipal wastewater treatment, health-related water microbiology, nanotechnology, environmental biotechnology, bioremediation and microbial ecology. After 31 years of specializing in the field of water research, she is a C1 rated scientist in South Africa, and an elected member of the Academy of Science of South Africa. Her research has attracted global recognition as evidenced by numerous awards, publications in peer review journals, collaborations she has established with other universities beyond the borders of South Africa, and the number of students originating from many parts of Africa who obtained their master's and PhD degrees under her guidance and mentorship. Momba is a member of 13 scientific committees and reviewer of about 15 refereed journals. She is a mother.

Partha Sarathi MUKHERJEE

Inorganic and Physical Chemistry Department
Indian Institute of Science
Bangalore, India



Membership Section 04. Chemical Sciences

Born in Markar, West Bengal, India, on 11 February 1973.

Mukherjee is currently a professor of chemistry at the Indian Institute of Science, Bangalore, India. He is a recipient of the NASI-Scopus Young Scientist Award, the Indian National Science Academy Medal, the S. S. Bhatnagar Prize, TWAS young affiliateship and the Swarnajayanti fellowship of the Government of India. He was recently featured by the Department of Science and Technology, India, as one of the 75 scientists under 50 who are shaping Indian science. He is an elected Fellow of the Indian Academy of Sciences. Mukherjee is or was in the editorial advisory boards of several journals: *Inorganic Chemistry*, *Inorganica Chimica Acta*, *Inorganic Chemistry Frontiers*, *The Chemical Records*, *Aggregate*, and *Scientific Reports*. He is currently serving as an associate editor of *Inorganic Chemistry*. He works on self-assembled discrete organic and coordination molecular architectures including their use as molecular vessels in catalysis, sensing, light-harvesting and drug delivery. He has published over 235 papers in peer-reviewed journals with a current h-index of 71.

Sultana Nurun NAHAR

The Ohio State University (OSU)
Department of Astronomy
Columbus, United States of America



Membership Section 09. Physics, Astronomy & Space Sciences

Born in Dhaka, Bangladesh, on 10 January 1955.

Nahar is a professor at The Ohio State University (OSU), United States of America, and a co-founder of atomic astrophysics field. She studies the four dominant atomic radiative and collisional processes, such as radiative transitions, photoionization, electron-ion recombination, and electron impact excitation, in astrophysical plasma, X-ray spectroscopy for bio-medical applications, spectroscopy of kilonovae emission, and diagnostics for bio-signature elements in exo-planetary atmosphere, with high accuracy methodology. She has made fundamental contributions to these processes in characterizing resonant features, developed algorithm for theoretical spectroscopy, and developed precise unified theory for electron-ion recombination process with A. K. Pradhan at OSU. Findings of their studies are accumulated in the textbook *Atomic Astrophysics and Spectroscopy* (Cambridge University Press). Her results from large scale computations are archived in her database, NORAD-Atomic-Data, at OSU. She is active in STEM education and research globally through research training, lectures, introducing and sponsoring programmes. She is the founder of the International Society of Muslim Women in Science with members from 33 countries.

Helena Judith NUSSENZVEIG LOPES



Universidade Federal do Rio de Janeiro
Instituto de Matematica
Ilha do Fundao, Rio de Janeiro, Brazil

Membership Section 08. Mathematical Sciences

Born in Rio de Janeiro, Brazil, on 29 April 1963.

Nussenzeig Lopes (PhD, 1991, University of California, Berkeley, United States of America) is full professor at the Universidade Federal do Rio de Janeiro; prior to this she was a professor at the Universidade Estadual de Campinas. Her research area is fluid dynamics and partial differential equations. She served as editor-in-chief for the Brazilian Mathematical Society publishing company and on several mathematics journals editorial boards; she is managing editor for *Orbita Mathematicae*, the new journal of the Mathematical Union of Latin America and the Caribbean. She was second vice-president of the Brazilian Society of Applied and Computational Mathematics. She served on the scientific council of the Centre International des Mathématiques Pures et Appliquées (CIMPA), France, and is currently president of CIMPA. She is a Fellow of the American Mathematical Society and of the Society for Industrial and Applied Mathematics. She is a member of the Brazilian Academy of Sciences. She was inducted to the Order of Scientific Merit, Comendador class, and she was an invited speaker at the 2018 International Congress of Mathematicians. She received the TWAS Award in Mathematics in 2022.

Faith Hope Among'in OSIER



Imperial College London
London, United Kingdom of Great Britain and Northern Ireland

Membership Section 03. Medical & Health Sciences

Born in Busia, Kenya, on 1 May 1972.

Osier's expertise is in malaria, where she believes we can "make malaria history" through vaccination. She previously led two core teams of over 25 scientists in Kenya and Germany, that focused on creating highly effective malaria vaccines through vaccine candidate discovery, identifying immune correlates of protection and unravelling important mechanisms underlying antibody-dependent protection. They designed an innovative protein microarray KILchip®, a first of its kind in Africa. Through the South-South Malaria Antigen Research (SMART) Partnership, they assembled 10,000 samples from across Africa to probe their chip, the largest study of this nature. They created a paradigm shift in the understanding of the mechanisms that underpin protective immunity to malaria. Osier is past president of the International Union of Immunological Societies (more than 60,000 members globally)—the first African and only second woman in this role. She has won prestigious prizes including: Royal Society Pfizer; Sofja Kovalevskaja; and Medical Research Council (United Kingdom of Great Britain and Northern Ireland) Department for International Development African Research Leader. She was honored with the prestigious British Society of Immunology Honorary Lifetime Membership Award (2022).

Bruce OVBIAGELE

University of California, San Francisco
San Francisco, CA, United States of America

Membership Section 03. Medical & Health Sciences

Born in Lagos, Nigeria, on 29 July 1969.

Ovbiagele, who holds Medical Doctor, Master of Science, Master of Advanced Studies, Master of Business Administration, Master of Legal Studies degrees, is professor of neurology and associate dean at the University of California, San Francisco. His primary research involves translation of evidence-based interventions into clinical practice and community settings, to improve stroke outcomes for underserved and vulnerable populations around the world. He currently leads several studies of stroke in the United States of America and sub-Saharan Africa. Ovbiagele has published over 600 peer-reviewed articles (h-index 89) in the areas of stroke prevention, risk factors and outcomes. His work has been recognized with the Pessin and Wartenberg Awards of the American Academy of Neurology; Penn Award of the American Neurological Association; Mridha Humanitarian Award of the American Brain Foundation; Feinberg and Stroke Council Awards of the American Stroke Association; Haddock International and Distinguished Scientist Awards of the American Heart Association, and Meritorious Achievement Award of the National Medical Association. He chaired the International Stroke Conference (2016–2018) and is current editor-in-chief of the *Journal of the American Heart Association*. He serves on the board of the World Stroke Organization.



Ashok PANDEY

Centre for Energy and Environmental Sustainability
Lucknow, UP, India

Membership Section 02. Biological Sciences

Born in Kanpur, India, on 1 January 1956.

Pandey is currently executive director, Centre for Energy and Environmental Sustainability, Lucknow, India. Formerly, he was distinguished scientist at the Centre for Innovation and Translational Research, Indian Institute of Toxicology Research of the Council of Scientific & Industrial Research (CSIR), Lucknow, India, and chief scientist and head, Centre for Biofuels, CSIR National Institute for Interdisciplinary Science and Technology, Trivandrum. He is also HTBS National Innovation Chair (Biotechnology), Distinguished Professor in University of Petroleum & Energy Studies, Dehradun, and distinguished adjunct professor, Saveetha Institute of Medical and Technical Sciences, Chennai. His major research and technological development interests are industrial and environmental biotechnology, and energy biosciences, focusing on sustainability and circular economy. Pandey is/has been adjunct/visiting professor/scientist in universities in France, Germany, Brazil, Argentina, Mexico, Canada, China, Republic of Korea, South Africa, Malaysia, Thailand, Switzerland, United States of America, United Kingdom of Great Britain and Northern Ireland (UK), etc. He is the recipient of many national and international awards and honours, which include Fellow of four national and five international academies such as International Society for Energy, Environment & Sustainability, and Royal Society of Biology (UK).



Bijaya PANT

Central Department of Botany
Tribhuvan University
Kirtipur, Kathmandu, Nepal



Membership Section 02. Biological Sciences

Born in Tehrathum, Nepal, on 17 September 1965.

Pant obtained her Master of Science degree in botany from Tribhuvan University, and a PhD in biotechnology from Hiroshima University, Japan. Her major fields of research are application of plant tissue culture in threatened, endangered and economically important plant species in Nepal. She is currently a professor in Central Department of Botany, Tribhuvan University, and also leads Annapurna Research Centre, a non-governmental, and non-profit organization, as a research director. Since over two decades, her active leadership has contributed significantly in developing and promoting tissue culture technology for economic benefit for the people of Nepal through her groundbreaking research. Pant is one of the very few Nepali scientists who have passionately and consistently worked in this important field of research. She has made significant contributions to academics as well as in human resource development in her country by supervising PhD and master's students. She has contributed to the establishment and development of biotechnology education and research in Nepal by her involvement in various activities.

PIAO Shilong

College of Urban and Environmental Sciences
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Haidian District, Beijing, China



Membership Section 07. Earth, Climate & Environmental Sciences

Born in Longjing, China, on 27 April 1976.

Piao (PhD, 2004, Peking University, China) is Boya distinguished professor, director of Institute of Carbon Neutrality, deputy director of Department of Science, Peking University. He is a member of the Chinese Academy of Sciences, and of the Standing Committee for the fourteenth Chinese People's Political Consultative Conference. He served on the Scientific Steering Committee for Global Carbon Project and acted as lead author for the fifth and sixth assessment reports of Intergovernmental Panel on Climate Change. His researches have focused on the relationships between terrestrial ecosystems and climate change, and he has made systematic scientific achievements in assessing the carbon sink of China's terrestrial ecosystems, and the response and feedback of terrestrial ecosystems to climate change. He has published over 100 papers as first or corresponding author in peer-reviewed international journals, including four articles in *Nature*, many in Nature-branded journals and in *Proceedings of the National Academy of Sciences (PNAS)*. His researches were elected as one of the Top 10 News of Chinese Fundamental Research in 2009, and Top 10 Scientific and Technological Advances in Chinese Higher Education Institutions in 2013.

Dipendra PRASAD

Department of Mathematics
 Indian Institute of Technology
 Powai, Mumbai, India



Membership Section 08. Mathematical Sciences

Born in Ghazipur, India, on 22 March 1960.

Prasad (PhD, Harvard University, 1989) has been chair professor, Indian Institute of Technology Bombay, Mumbai, India, since November 2018. He was distinguished professor (till April 2020) and dean, School of Mathematics (2011–2013), Tata Institute of Fundamental Research, Mumbai; president, Commission on Developing Countries of International Mathematical Union (2018–22); and president, Indian Mathematical Society (2022). He is an elected Fellow of the Indian Academy of Science (1995), and Indian National Science Academy (2003). He was awarded: Swarnajayanti Fellowship for Mathematics (1998–2003); JC Bose Fellowship (2010–2015 and 2015–2020); and Mega Grant, St. Petersburg, Russia (2018–2021). Prasad received the S.S. Bhatnagar Award for Mathematical Sciences (2002), and the TWAS Award in Mathematics (2019). Among his professional recognitions are: membership, Institute for Advanced Study, Princeton (1992–93, 2006–07); research professorship, Mathematical Sciences Research Institute, Berkeley, United States of America (2014); Chaire Jean Morlet, Centre International de Rencontres Mathématiques, Marseille, France (2016). He was an Invited speaker at the International Congress of Mathematicians in 2018.

Jurgenne Honculada PRIMAVERA

Zoological Society of London (Philippine Field Office)
 La Paz, Iloilo City, the Philippines



Membership Section 02. Biological Sciences

Born in Butuan City, the Philippines, on 22 February 1947.

Primavera obtained a PhD in marine science from University of the Philippines Diliman, and master's degree in zoology from Indiana University, United States of America. She taught at Mindanao State University, but a rebellion made her growing family flee to relative peace in Iloilo, central Philippines, where she worked at the Southeast Asian Fisheries Development Center, Aquaculture Department. Since her studies in the 1980s, she rang early warning bells on the perils of unplanned aquaculture. Her research shifted to the mangrove-penaeid shrimp connection and mangrove-friendly aquaculture for which she was conferred a PhD honoris causa by Stockholm University (2004). The citation read: "... she has shown that mangroves are key areas for recruitment of fish and shrimp and that development of conventional shrimp farming may have far reaching negative economic and social implications... [To] create sustainable alternatives she is now doing research on ... integrated farming of shrimp, fish, crabs and mangrove". She has published around 170 scientific papers, reviews, manuals, books and other publications, including the *Handbook of Mangroves in the Philippines* – Panay that received the 2005 Outstanding Book Award by the National Academy of Science and Technology, Philippines.

QIAO Jie

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Membership Section 03. Medical & Health Sciences

Born in Heilongjiang, China, on 1 February 1964.

Qiao is academican of the Chinese Academy of Engineering, vice-president of the China Association for Science and Technology, executive vice-president of Peking University, director of Peking University Health Science Center, academican of American Academy of Arts and Sciences (international honorary member), and Honorary Fellow of Royal College of Obstetricians and Gynaecologists. She has a high reputation in the field of reproductive medicine in China and worldwide. For more than 30 years, she has endeavored to unravel the profound mystery of human reproduction and achieved a number of theoretical and technical breakthroughs in the systematic study of gametogenesis and embryo development, infertility causes and clinical treatments, the protection and preservation of female fertility as well as developing a series of new pre-implantation diagnosis (PGT) methods, which greatly reduces the cost and improves the efficiency in identifying inherited diseases. She also continuously pays attention to the construction of the maternal and child public health system, and the health of women and children throughout their entire life cycle.



Kanchugarakoppal RANGAPPA

University of Mysore
Manasagangotri, Mysore, Karnataka, India

Membership Section 02. Biological Sciences

Born in Kanchugarakoppal, Mysore, Karnataka, India, on 26 May 1955.

Rangappa has developed more than 7,500 synthetic small molecules and implemented some of them against therapeutically important proteins. He served as a postdoctoral fellow, research associate, and visiting professor in more than 10 countries. He is a Fellow of: Royal Society of Chemistry, London; National Academy of Sciences, India; Biotech Research Society of India; and Karnataka Science and Technology Academy, India. He has published over 650 research papers in peer reviewed journals, and holds 14 patents for small-molecule inhibitors of therapeutic targets. Three of his patented compounds namely DMBO, NPB, and AMPC have been sold commercially as pharmacological inhibitors of growth factors, BAD protein, TFF3, NF- κ B, CXCR4, c-MET, human methionyl-tRNA synthetases, Wnt/ β -catenin, EGFR, TGF, PI3K/AKT/mTOR, heparanase and many more therapeutically relevant proteins which are constitutively expressed in various human cancers respectively. His publications received over 16,000 scientific citations, with an h-index of 66. He has guided 65 candidates for PhD degree.



Valipe Ramgopal RAO

Birla Institute of Technology & Science, Pilani (BITS Pilani)
Pilani, Rajasthan, India

Membership Section 05. Engineering

Born in Kollapur, Mahabub Nagar, Telangana, India, on 16 August 1965.

Rao is the group vice-chancellor of Birla Institute of Technology & Science, Pilani (BITS Pilani), overseeing campuses in Pilani, Hyderabad, Goa, Dubai, and Mumbai. Before joining BITS in 2023, he served as director of Indian Institute of Technology (IIT) Delhi (2016–2021) and was a chair professor at IIT Bombay and IIT Delhi. A globally recognized nanoelectronics researcher, he has more than 500 research papers, 50 patents (20 issued in the United States of America), and 15 licensed patents, including intellectual property used in millions of integrated circuits. He co-founded two deep-tech startups, Nanosniff, and Soilsens, with successful products. Rao played a key role in India's nanoelectronics programmes and is a Fellow of Institute of Electrical and Electronics Engineers (IEEE), Indian National Academy of Engineering, Indian Academy of Sciences, National Academy of Sciences, India, and Indian National Science Academy. He has supervised 52 PhD students working globally. His more than 40 awards include the Shanti Swarup Bhatnagar Prize, Infosys Prize, IEEE Electron Devices Society Education Award, and three honorary doctorates. He also chairs multiple national committees on education, research, and innovation. He is the Board of Governors chairperson of Jawaharlal Nehru Centre for Advanced Scientific Research, and National Institute of Food Technology Entrepreneurship and Management, two institutions of national importance in India.



Mohammad SAL MOSLEHIAN

Ferdowsi University of Mashhad
Faculty of Mathematical Sciences, Department of Pure Mathematics
Mashhad, Islamic Republic of Iran

Membership Section 08. Mathematical Sciences

Born in Mashhad, Islamic Republic of Iran, on 21 March 1966.

Moslehian is a professor of mathematics at the Ferdowsi University of Mashhad, Islamic Republic of Iran. He was the president of the Iranian Mathematical Society and is a member of the Academy of Sciences of Iran. His research areas mainly include operator theory and functional analysis. He was a senior associate at the Abdus Salam International Centre for Theoretical Physics (ICTP), Italy, and a visiting professor at several universities in England, Sweden, and Japan. He is the editor-in-chief of the journals *Banach Journal of Mathematical Analysis*, *Annals of Functional Analysis*, and *Advances in Operator Theory* being published by Birkhäuser/Springer.



Rokia SANOGO

Université des Sciences, des Techniques et des Technologies de Bamako (USTTB)
 Faculté de Pharmacie
 Bamako, Mali



Membership Section 03. Medical & Health Sciences

Born in San, Mali, on 1 January 1964.

Sanogo, Doctor of Pharmacy, PhD in pharmacognosy, teaches pharmacognosy, phytotherapy and traditional medicine. She is head of the Traditional Medicine Department, a center of excellence of the West African Health Organization. She has already supervised more than 100 theses and published more than 100 articles and developed phytomedicines. She was a laureate of the Kwame Nkrumah Prize for Women Scientists of the African Union in 2016, First Prize Galien Africa for the best product from the African pharmacopoeia in 2021—BALEMBO Syrup, used against dry cough associated with COVID-19. She is the project coordinator of the research and innovation platform for the production and marketing of medicines for human and veterinary use from the African Pharmacopoeia, within the thematic programme African Pharmacopoeia and Traditional Medicine of the African and Malagasy Council for Higher Education. She is an expert for the Oréal-UNESCO Sub-Saharan Africa Regional Programme for Women in Science (2019) and vice-chair of the World Health Organization Regional Expert Committee on Traditional Medicine in the Response to COVID-19 (2020). She is a member of the Academy of Sciences of Mali.

Celia SHAHNAZ

Bangladesh University of Engineering and Technology (BUET)
 Dhaka, Bangladesh



Membership Section 05. Engineering

Born in Dhaka, Bangladesh, on 28 April 1976.

Shahnaz is a senior member of the Institute of Electrical and Electronics Engineers (IEEE), and a Fellow of the Institution of Engineers, Bangladesh. She received her PhD degree from Concordia University, Canada, as a winner of the Canadian Common Scholarship. She has been a professor, Department of Electrical and Electronic Engineering, Bangladesh University of Engineering and Technology since 2015. She was a recipient of Bangladesh Academy of Science Gold Medal for her contributions in science and technology. Recently, her nomination has been approved and she has been inducted into IEEE-Eta Kappa Nu as a professional member into the Eta Chapter of the board of governors. She has been elected as 2022 chair-elect of IEEE Women in Engineering (WIE) Committee and she is serving as the 2023–24 IEEE WIE committee chair. She has been appointed as 2022–23 member, IEEE New Initiative Committee; 2021–23 Member, IEEE History Committee; liaison between IEEE History Committee and IEEE WIE. She has served as 2021–23 chair, IEEE Signal Processing Society (SPS) Women in Signal Processing; 2021–23 liaison between IEEE SPS and IEEE WIE; 2021–22 member, IEEE Educational Activities Board Faculty Resource Committee.

Zabta Khan SHINWARI

Federal Urdu University of Arts Science and Technology
Islamabad, Pakistan

Membership Section 02. Biological Sciences

Born in Kohat, Khyber Pakhtoonkhwa, Pakistan, on 3 March 1959.

Shinwari is the distinguished national professor and vice-chancellor of the Federal Urdu University of Arts, Science & Technology. A Kohat native, he holds a PhD from Kyoto University, Japan, and has held multiple senior roles, including chief executive officer of Qarshi Research International and vice-chancellor of Kohat University of Science & Technology. He is also the founder of the University of Science & Technology, Bannu. His research interests include molecular systematics, bioethics, and biotechnology. He has reported over 200 plant genes, with five showing drought and stress tolerance. Shinwari has authored eight books and over 550 research articles, with more than 26,550 citations, an h-index of 85, and 3 patents. He has also mentored over 105 Master of Philosophy and PhD students.



Ramesh T. SUBRAMANIAM

Faculty of Science
Universiti Malaya
Lembah Pantai, Kuala Lumpur, Malaysia

Membership Section 09. Physics, Astronomy & Space Sciences

Born in Selangor, Malaysia, on 20 November 1972.

Ramesh T. Subramaniam is a material scientist well known for his outstanding scholastic contribution on solutions for energy storage and harvesting devices for clean energy and sustainable smart cities of tomorrow. He received the Pacificchem Young Scholar Award from the American Chemical Society, the Young Scientist Award from the International Union of Pure and Applied Chemistry, the Established Scientist Award by the Royal Society, the China Scholar fellowship by the Association of Southeast Asian Nations, and the Science and Technology Award from the Malaysia Toray Science Foundation. He was selected as an InterAcademy Partnership Young Scientist, and is a member of the Global Young Academy. He is a Fellow of the Royal Society of Chemistry, United Kingdom of Great Britain and Northern Ireland (UK), and a Fellow of the Academy of Sciences Malaysia. He is also a recipient of the Fulbright Fellowship at Princeton University, United States of America, and of the International Senior Research Fellowship, and Visiting Senior Fellowship of the Institute of Advanced Studies, Durham University, UK, where he is also a distinguished Fellow. He was recognized as one of the world's top 2% scientists for career-long citation Impact.



Marie-Anne VAN SLUYS

Universidade de São Paulo
 Departamento de Botânica (IBUSP)
 São Paulo/SP, Brazil



Membership Section 02. Biological Sciences

Born in Rio de Janeiro, Brazil, on 3 September 1961.

Van Sluys (PhD in genetics and microbiology, 1989) is a full professor at the University of São Paulo. Her research focuses on plant-microbe interaction relevant to agriculture and the natural environment, emphasizing genome evolution and how transposable elements may account for genetic diversity. She contributed to spreading biotechnology and genomics in Brazil and supervised over 50 students working in the field, now based in Brazil or abroad. Among other activities, she also contributed to organizing the Plant Molecular Biology research community in Brazil. She published over 100 papers, attended scientific meetings as a speaker, and organized multiple symposia and conferences. Van Sluys served as life-science adjunct panel member at FAPESP (São Paulo Research Foundation) for 15 years, and at the Brazilian National Council for Scientific and Technological Development (CNPq) for 4 years. She served on international scientific panels, including the National Academies, United States of America. Van Sluys has been a member of the São Paulo Academy of Sciences (ACIESP) since 2015, presently vice-president and was elected to the Brazilian Academy of Sciences (ABC) in 2016. Acting on Strategic Committees from ABC, ACIESP, Brazilian Society for the Advancement of Science (SBPC) and French National Research Institute for Sustainable Development (IRD).

Mohammad WASAY

Aga Khan University
 Karachi, Pakistan



Membership Section 03. Medical & Health Sciences

Born in Karachi, Pakistan, on 1 October 1964.

Wasay is currently Alicharan endowed professor of neurology at Aga Khan University (AKU); past president, Pakistan Society of Neurology and Pakistan Stroke Society; president, Neurology Awareness and Research Foundation; chairman, Advocacy and awareness Task Force of World Federation of Neurology; editor, *Pakistan Journal of Neurological Sciences*; chief editor, *Jahan e Aasab* (neurology public awareness magazine); chair, Seed Grants Research Committee at AKU; and co-chair, Non-Communicable Diseases Think Tank at AKU. Wasay received several national and international awards for educational, research and advocacy activities, including Teachers Recognition Award (American Academy of Neurology), Distinguished Teacher Award (Pakistan Society of Neurology), Outstanding Teacher Award (AKU), Gold Medal for Research (Pakistan Academy of Medical Sciences), Advocacy Leader of the Year Award (American Academy of Neurology), Victor Rivera Award (University of Texas Southwestern Medical Center, United States of America) and Lester R. Bryant Founders Award (Marshall University, Huntington, United States of America). He was awarded fellowship of the Pakistan Academy of Medical Science and Gold Medal in Health Sciences by the Pakistan Academy of Sciences.

YANG Cuihong

Academy of Mathematics and Systems Science
 Chinese Academy of Sciences
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Membership Section 10. Economic & Social Sciences, Humanities & Arts

Born in Henan Province, China, on 1 December 1971.

Yang obtained her PhD degree from the Institute of Systems Science of the Chinese Academy of Sciences (CAS), China, in 1999. She is the vice-president and professor at the Academy of Mathematics and Systems Science, CAS; director of the Key Laboratory of Management, Decision and Information Systems; and vice-director of the Centre of Forecasting Science both institutions affiliated to the Academy of Mathematics and Systems Science of CAS. She served as the vice-president of the International Input-Output Association (2013–2018; 2023–2024) and as the executive vice-president of the Chinese Input-Output Association (2016–present). Her awards include the TWAS Siwei Cheng Award in Economic Sciences, the National Award for Youth in Science and Technology (China), the National Natural Science Fund for Distinguished Young Scholars (China), and the Sun Yefang Economic Award, the most reputational award in economics in China, among many others.

YANG Weicai

Institute of Genetics and Developmental Biology
 Chinese Academy of Sciences
 Chaoyang District, Beijing, China



Membership Section 01. Agriculture, Nutrition & Food Systems Sciences

Born in Chongqing, China, on 14 February 1964.

Yang is professor and current director of the Institute of Genetics and Developmental Biology, Chinese Academy of Sciences (IGDB-CAS). He obtained his PhD in 1994 from Wageningen University, Kingdom of the Netherlands. From 1994 to 2000, he did postdoctoral research in Wageningen University; Cold Spring Harbor Laboratory, United States of America; and the Institute of Molecular Agrobiolgy, Singapore. In 2000, he joined the Temasek Life Sciences Laboratory in Singapore as senior scientist. Since 2003, Yang has been a principal investigator at IGDB-CAS. His researches focus on molecular mechanisms governing plant development and molecular mechanisms of nitrogen-fixing rhizobium symbioses. He has obtained a series of outstanding achievements in the field of plant development. He has published nearly 100 papers in top international journals, including *Nature*, and *Science*. He is an academic leader in the field of plant developmental biology in China, and has important international academic influence. Yang received many academic awards and honors.

YE Xiangdong

University of Science and Technology of China
Department of Mathematics
Hefei, Anhui, China



Membership Section 08. Mathematical Sciences

Born in Hefei, Anhui province, China, on 29 March 1963.

Ye (PhD in mathematics, Moscow State University, 1991) is a full professor, Department of Mathematics, University of Science and Technology of China. He had a postdoctoral affiliation at International Centre for Theoretical Physics, Italy (1991–1993). He has been engaged in the research of topological dynamic systems, ergodic theory and its applications to combinatorial number theory for nearly 40 years. With his collaborators, he has carried out in-depth research on the structure and saturation theorems of dynamical systems, convergence of multiple ergodic averages, entropy theory, complexity of dynamical systems and its applications; and obtained a series of profound results. Ye received the 14th Shiing-Shen Chern Prize issued by the Chinese Mathematical Society (2013), the Second Prize of National Natural Sciences (2018), and the He Liang He Li Award for Progress in Science and Technology (2020). In 2019, he was elected as a member of the Chinese Academy of Sciences.

ZHANG Yue

University of Science and Technology Beijing
Haidian District, Beijing, China



Membership Section 05. Engineering

Born in Liling, Hunan, China, on 21 November 1958.

Zhang is a professor at University of Science and Technology Beijing (USTB), China. He obtained his PhD degree on metal physics in 1993 from USTB. He was awarded the National Outstanding Young Scientist Fund in 2003, and elected as academicien of the Chinese Academy of Sciences in 2019. He currently serves as the director of State Key Laboratory for Advanced Metals and Materials, director of Beijing Key Laboratory for Advanced Energy Materials and Technologies, and dean of the Academy for Advanced Interdisciplinary Science and Technology at USTB. Zhang has been nominated as chair scientist of major national scientific research programmes, member of the general expert group of the National Key Research and Development Programme on Nanoscience and Nanotechnology, member of the Materials Science and Engineering Group of the disciplinary appraisal panels in the Academic Degrees Committee of the State Council, deputy director of Materials Department of the Science and Technology Commission of the Ministry of Education of China, Fellow of the Royal Society of Chemistry (United Kingdom of Great Britain and Northern Ireland), chairman of the Chinese Society of Stereology, as well as executive council member of the Chinese Society of Metals.

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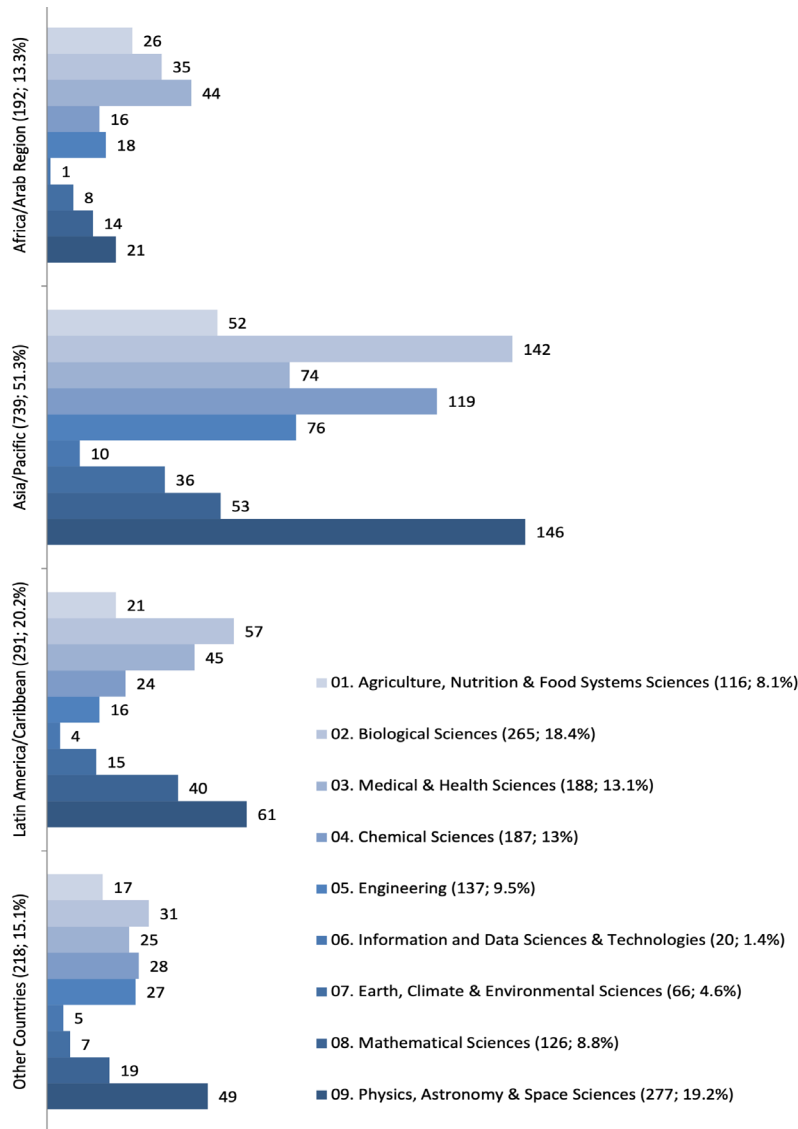
- The Bibliotheca Alexandrina in Alexandria, Egypt
- The Jawaharlal Nehru Centre for Advanced Scientific Research in Bangalore, India
- The Chinese Academy of Sciences in Beijing, China
- The Academy of Sciences of South Africa in Pretoria, South Africa, and
- The Brazilian Academy of Sciences in Rio de Janeiro, Brazil.



TWAS Regional Partners

TWAS represents the best of science in the developing world. TWAS Fellows are elected from scientists who made contributions to their respective fields and that meet a pool of internationally accepted standards of excellence.

As of January 2025, TWAS had 1,440 Fellows representing 112 countries (of origin or of residence).



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