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The World Academy
of Sciences

Members Inducted in 2024



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

Members Inducted in 2024

TWAS Fellows elected 47 new members to the Academy effective in 2024:

- Noorsaadah ABD RAHMAN (Malaysia)
- Rashad ABDUL-GHANI (Yemen)
- Avinash Kumar AGARWAL (India)
- Gabriela ARAUJO-PARDO (Mexico)
- Sayera BANU (Bangladesh)
- Giriraj Ratan CHANDAK (India)
- Rohana CHANDRAJITH (Sri Lanka)
- CHEN Li-Chyong (Taiwan, China)
- CHI Lifeng (China)
- Sunday EKESI (Kenya)
- Elizabeth P. B. FONTES (Brazil)
- Abba B. GUMEL (the United States of America)
- Aizan HAMID (Malaysia)
- Mirza HASANUZZAMAN (Bangladesh)
- Monica HEILBRON (Brazil)
- HUANG Jianping (China)
- JIA Weiping (China)
- Khalid Mohammed KHAN (Pakistan)
- Lauro Tatsuo KUBOTA (Brazil)
- LEE Tatia Mei Chun (China)
- Iscia LOPES-CENDES (Brazil)
- MA Guanghui (China)
- Sergei MOSYAKIN (Ukraine)
- Sohail NADEEM (Pakistan)
- Harini NAGENDRA (India)
- Chukwumerije OKEREKE (the United Kingdom of Great Britain and Northern Ireland)
- Anthony Ifeanyin OKOH (South Africa)
- Youssef OUKNINE (Morocco)
- Hem Raj PANT (Nepal)
- Giorgio PARISI (Italy)
- Eduardo RIOS-NETO (Brazil)
- Mohd Sapuan SALIT (Malaysia)
- Shamala Devi SEKARAN (Malaysia)
- Kadambot SIDDIQUE (Australia)
- Abdolreza (Arash) SIMCHI (Islamic Republic of Iran)
- Rekha S. SINGHAL (India)
- Antonio SOUZA FILHO (Brazil)
- Miriam Cristina Del Milagro STRUMIA (Argentina)
- TANG Tao (China)
- Yahya TAYALATI (Morocco)
- Michael Alexander TAYLOR (Jamaica)
- Marisol TOLEDO (Plurinational State of Bolivia)
- Romildo Dias TOLEDO FILHO (Brazil)
- Judith Ndongo Embola TORIMIRO (Cameroon)
- Avesh Kumar TYAGI (India)
- Ambroise WONKAM (the United States of America)
- YAN Xiyun (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].

Noorsaadah ABD RAHMAN

University of Malaya
Institute for Advanced Studies
Kuala Lumpur, Malaysia



Membership Section 04. Chemical Sciences

Born in Johor Bahru, Malaysia, on 6 November 1961.

Abd Rahman obtained her PhD in organic synthesis from Cambridge University in 1990 and subsequently joined the Department of Chemistry at the University of Malaya. From 2006–2014, she was the director of the Institute of Research Management and Monitoring, and in 2015 she was appointed deputy vice-chancellor (research and innovation) of University of Malaya, until her official retirement in November 2021. In 2014, she was named a Fellow of the Malaysian Academy of Sciences (ASM) and was bestowed the Top Research Scientist Award. In 2018, she was elected Fellow (ChM) of the Institut Kimia Malaysia and, in 2024, she was named a Fellow of The World Academy of Sciences. She chairs the Malaysian Open Science Alliance that oversees the implementation of the national open science initiatives (MOSP) since 2019. In 2024, she was elected as the secretary-general of ASM.

Rashad ABDUL-GHANI

Department of Medical Parasitology, Faculty of Medicine and Health Sciences
Sana'a University
and
Tropical Disease Research Center, Faculty of Medicine and Health Sciences
Sana'a, Yemen



Membership Section 03. Medical & Health Sciences

Born in Lahj, Yemen, on 1 January 1976.

Abdul-Ghani received a bachelor's degree in medical laboratory sciences from the Faculty of Medicine and Health Sciences, Sana'a University (Yemen), in 1998. He pursued postgraduate studies at Alexandria University, obtaining a master of public health sciences (2010) and a PhD in applied and molecular parasitology (2014). He is currently a professor at the Department of Medical Parasitology, Faculty of Medicine and Health Sciences, Sana'a University. He served as a principal or co-investigator on several research projects funded by Special Programme for Research and Training in Tropical Diseases/Regional Office for the Eastern Mediterranean of the World Health Organization (WHO), contributing to his expertise in study design, proposal development, research implementation, monitoring and evaluation, and statistical analysis. He published several articles, reviews, perspectives, and editorials in internationally recognized journals, besides serving as a reviewer and editorial board member for several indexed journals. He served as a member of WHO Strategic Advisory Group of Experts on In Vitro Diagnostics (August 2018–July 2022) and contributed to a number of WHO documents and reports.

Avinash Kumar AGARWAL

Department of Mechanical Engineering
Indian Institute of Technology Kanpur
Kanpur, India



Membership Section 05. Engineering

Born in Karauli, Rajasthan, India, on 22 August 1972.

Agarwal obtained his bachelor's degree in mechanical engineering in 1994, from Malviya Regional Engineering, Jaipur and his Master of Technology and PhD (both in energy, in 1996 and 1999 respectively) from the Indian Institute of Technology (IIT) Delhi. After his postdoctoral fellowship (1999–2001) at University of Wisconsin-Madison (United States of America), he joined IIT Kanpur in 2001. His interests are internal combustion engines, alternate and conventional fuels, optical diagnostics, laser ignition, fuel sprays, lubricating oil tribology, and large-bore engines. He has developed laser-fired hydrogen and compressed natural gas engines in automotive sizes, and the first electronic fuel injection system equipped with a locomotive engine for Indian Railways. Agarwal has published more than 525 journal and conference papers, 63 books, 129 chapters, more than 17300 Scopus Citations, and 26000 Google Scholar citations. He is an editor of *Fuel*. He is a Fellow of the National Academy of Sciences, India (2018), the Royal Society of Chemistry (2018), the American Association for the Advancement of Science (2020), and Combustion Institute (2022), and the recipient of many awards including Sir J C Bose National Fellowship (2019), and Clarivate Analytics India Citation Award (2017).

Gabriela ARAUJO-PARDO

Math Institute
National University of Mexico (UNAM)
Juriquilla, Querétaro, México



Membership Section 08. Mathematical Sciences

Born in Mexico City, Mexico, on 13 November 1968.

Araujo-Pardo has been the president of the Mexican Mathematical Society since 2022. In 2000, she earned her PhD at the Faculty of Sciences at the National University of Mexico (UNAM), and had a postdoctoral position at the Polytechnic University of Catalonia, Spain (2002). In 2020, she took a sabbatical year at the Université Libre de Bruxelles. Currently, she is a researcher at the Institute of Mathematics (Campus Juriquilla) and a member level III in the National Council of Humanities, Science and Technology (CONAHCYT). Her area of expertise is discrete mathematics, specifically finite geometries and their relationship with graph theory. She has published approximately 70 research articles, supervised theses at all levels, and participated in more than 80 conferences, both nationally and internationally. In 2003, she received the "Sofía Kovalevskaia Support" from the Mexican Mathematical Society and the Sofia Kovalevskaia Foundation. She has been a member of the Mexican Academy of Sciences since November 2013 and received the "Sor Juana Inés de la Cruz 2013" recognition from UNAM in the same year.

Sayera BANU

icddr,b
Mohakhali, Dhaka, Bangladesh



Membership Section 03. Medical & Health Sciences

Born in Dhaka, Bangladesh, on 25 December 1964.

Banu's research focuses on mycobacterial infections, epidemiology, diagnostics, and therapeutics, all fields where she has fostered international and national collaborations. She is currently a senior scientist and head of the programme for emerging infections under the Infectious Diseases Division at the icddr,b (International Centre for Diarrhoeal Disease Research, Bangladesh), where she has been working since 1991. Among her achievements are establishing the state-of-the-art biosafety level 2+ mycobacteriology laboratory at icddr,b; conducting the first-ever multi-drug resistant tuberculosis (TB) sentinel surveillance in South-East Asia; bringing in new tools and technology in advancing TB diagnosis and management; research on TB prevalence and transmission in prison settings; standardizing stool processing method for Xpert MTB/RIF assay; and the successful development and implementation of an innovative social enterprise model for TB diagnosis and management in the private sector which has been incorporated in the National Strategic Plan. Banu is a fellow of the Bangladesh Academy of Sciences, and serves as a member in several scientific/programme committees, and has over 120 publications in peer-reviewed journals.

Giriraj Ratan CHANDAK

Genomic Research on Complex diseases (GRC-Group)
CSIR-Centre for Cellular & Molecular Biology
Hyderabad, India



Membership Section 03. Medical & Health Sciences

Born in Bikaner, Rajasthan, India, on 7 June 1963.

Chandak, a physician scientist, is the former director of the Centre for DNA Fingerprinting and Diagnostics, and Sir Jagadish Chandra Bose Fellow at the Centre for Cellular and Molecular Biology, Council of Scientific & Industrial Research, Hyderabad. He received his Doctor of Medicine degree in biochemistry from the Institute of Medical Sciences, at Banaras Hindu University, and his PhD in biochemistry from Osmania University. He is a Fellow of all four national science academies in India. His research interests include understanding the genetic and epigenetic basis of complex disorders of pancreas, including chronic pancreatitis, type 2 diabetes, and intermediate traits associated with them, with a focus on the foetal origins of adult common diseases. His other passion includes reducing the genetic burden on the society through the development of robust, rapid and affordable genetic tests for common genetic disorders like hemoglobinopathies and musculopathies and extending prenatal diagnosis and genetic counselling to the common man. He has developed a whole blood-based screening-cum-confirmatory molecular test that can help in early identification and aid to eliminate sickle cell anaemia in India.

Rohana CHANDRAJITH

Department of Geology, Faculty of Science
University of Peradeniya
Peradeniya, Sri Lanka



Membership Section 07. Earth, Climate & Environmental Sciences

Born in Gampaha, Sri Lanka, on 10 June 1963.

Chandrajith is working as a professor at the University of Peradeniya, Sri Lanka, and has more than 30 years of teaching and research experience. He is mainly involved in research in the field of environmental geochemistry, with a particular interest in bridging chemical, biological, and geological sciences to address diverse environmental problems, including hydrogeochemistry and medical geology. His current projects include freshwater geochemistry, the application of isotopes in low-temperature geochemical processes, the study of environmental relationships with human and animal health, and the reconstruction of Holocene climate changes using geochemical proxies. Chandrajith has published over 180 research papers in reputed international journals and written three books and 11 book chapters with a Google h-index of 43. He co-authored the book *Introduction to Medical Geology*, published by Springer, Germany. He received the prestigious Georg Forster Research Prize from the Alexander von Humboldt Foundation in Germany in 2022 and is also a Fellow of the National Academy of Sciences, Sri Lanka.

CHEN Li-Chyong

National Taiwan University
Taipei, Taiwan, China



Membership Section 09. Physics, Astronomy & Space Sciences

Born in Taipei, Taiwan, China, on 12 March 1959.

Chen received her Bachelor of Science in physics from the National Taiwan University (NTU) in 1981, and her PhD in applied physics from Harvard University (1989). Then, she worked at the General Electric Corporate R&D, Schenectady, New York (1989–1994), joined the Center for Condensed Matter Sciences (CCMS), NTU in 1994, and became a professor with the Physics Department in 2021. Chen was the director of CCMS (2012–2018), and since 2018 has been the director of the Center of Atomic Initiative for New Materials, a research centre featured by the Sprout Project under the Ministry of Education (MoE) in Taiwan. Chen's group is specialized in low-dimensional nanomaterials and their applications for optoelectronics and energy. She is a Fellow of both the Physical Society and the Vacuum Society in Taiwan, and the Materials Research Society in the United States of America. She has received numerous honours that include a Laureate of the 22nd Khwarizmi International Award, the Outstanding Research Award by the National Science and Technology Council (twice), the MoE Academic Award, and the Taiwan Outstanding Women in Science. Chen was elected as an Academician of the Asia Pacific Academy of Materials and Academician of Academia Sinica.

CHI Lifeng

Foreign Affairs Office of Jiangsu Provincial People's Government
Nanjing, China

Membership Section 04. Chemical Sciences

Born in Changchun, China, on 18 October 1957.

Chi is a professor at the Institute of Functional Nano and Soft Materials (FUNSOM), at Soochow University. She earned her PhD from the University of Göttingen, in Germany. She has long been engaged in research on surface interface molecular assembly and on-surface reactions, in the field of physical chemistry, publishing almost 500 papers in journals such as *Science* and *Nature*. She won the American Chemical Society (ACS) Nano Lectureship Award in 2016, and the International Union of Pure and Applied Chemistry (IUPAC) 2017 Distinguished Women in Chemistry or Chemical Engineering Award. In 2020, Chi was selected as a foreign academician of the Academia Europaea and a Fellow of the Chinese Chemical Society. In 2021 she was named an academician of the Chinese Academy of Sciences. Currently, Chi is the associate editor of the *ACS Nano* and *Chemical Journal of Chinese Universities* and serves as a member of the editorial and advisory boards of several academic journals such as *Angewandte Chemie-International Edition*, *Chemical Communications*, *Small*, and *Accounts of Materials Research*.



Sunday EKESI

International Centre of Insect Physiology and Ecology (icipe)
Nairobi, Kenya

Membership Section 01. Agriculture, Nutrition & Food Systems Sciences

Born in Gboko, Nigeria, on 11 June 1967.

Ekesi is an entomologist, research for development scientist, and science leader at the International Centre of Insect Physiology and Ecology (icipe), Nairobi, Kenya, with extensive experience in sustainable agriculture including microbial control, biological control, habitat management and conservation, pesticide management, biodiversity and climate change. He earned his PhD in 1999, at Ahmadu Bello University, Nigeria. He has published more than 270 peer-reviewed scientific articles, has given over 150 presentations at scientific gatherings, and trained more than 30 graduate students, both PhD and master's degree students. His awards include the Distinguished Scientist Award (2021) of the Entomological Society of America, the Curt Bergfors Foundation Food Planet Prize (2020), the 2024 TWAS Award in Agricultural Sciences (shared) and Justus von Liebig Award for World Nutrition (2025). Fellow of the Entomological Society of America, the Royal Entomological Society (United Kingdom of Great Britain and Northern Ireland), and the African Academy of Sciences, he holds an Extraordinary Professorship position at the University of Pretoria, South Africa. Ekesi is a member of the advisory board and trustee of various technical agencies and institutions in Africa and globally.



Elizabeth P. B. FONTES

Universidade Federal de Viçosa
Viçosa, MG, Brazil

Membership Section 01. Agriculture, Nutrition & Food Systems Sciences

Born in Visconde do Rio Branco, Brazil, on 24 December 1957.

Fontes is a professor at the Federal University of Viçosa (UFV), coordinator of the National Institute of Science and Technology in plant-pest interaction, and a member of the Brazilian Academy of Science and the National Order of Scientific Merit by the Brazilian Presidency. She was the coordinator of graduate programmes at UFV, head of the Biochemistry and Molecular Biology Department, scientific director of the Arthur Bernardes Foundation, and member of the Genetics Advisory Committee, National Council for Scientific and Technological Development (CNPq), and of the Agricultural Advisory Committee, Fundação de Amparo à Pesquisa do Estado de Minas Gerais (FAPEMIG). She is a member of the Evaluation Committee of Graduate Programmes in biotechnology of the Brazilian Federal Agency for Support and Evaluation of Graduate Education (CAPES), and serves as a monitoring and associate editor for scientific journals. She received numerous prestigious awards, including the Marcos Luiz dos Mares Guia Award, senior researcher category by the Secretary of Science and Technology of Minas Gerais, CAPES Thesis Advising 2021 Award and Honorable Mentions, Nano Cell Institute Award, Winner of the II Scientists and Entrepreneur of the Year, Fundação Arthur Bernardes Award for research achievement, and Peter H. Rolfs Medal of Merit in Research by UFV.



Abba B. GUMEL

Department of Mathematics
University of Maryland
College Park, Maryland, United States of America

Membership Section 08. Mathematical Sciences

Born in Jigawa State, Nigeria, on 4 June 1966.

Gumel is a distinguished professor of mathematics and the Michael and Eugenia Brin Endowed E-Novate Chair in mathematics at the Department of Mathematics, University of Maryland, United States of America. He also holds the honorary extraordinary professor position at the University of Pretoria, South Africa. His research focuses on using mathematical approaches to gain insight and provide understanding on the transmission dynamics and control of emerging and re-emerging infectious diseases of major public health significance. He has authored over 170 peer-reviewed research articles, supervised many graduate students and postdoctoral fellows, and written four edited books. He is the editor-in-chief of *Mathematical Biosciences*, one of the premier journals for mathematical biology research, and the recipient of numerous awards and honours, including the 2021 Bellman Prize. He is an elected Fellow of the American Association for the Advancement of Science, American Mathematical Society, Society for Industrial and Applied Mathematics, African Academy of Sciences, Nigerian Academy of Science, and African Scientific Institute. He presented the 2021 Einstein Public Lecture of the American Mathematical Society.



Aizan HAMID

Malaysian Research Institute on Ageing
Universiti Putra Malaysia
Serdang, Selangor, Malaysia



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

Born in Kota Bharu, Malaysia, on 1 February 1958.

Hamid is a distinguished social scientist and a pioneering figure in gerontology, renowned for her contribution to gerontology education, research, and policy development in Malaysia and the surrounding region. She established a multi- and trans-disciplinary research institute at Universiti Putra Malaysia, in 2002, and was appointed as its founding director. The Institute was awarded the national status of Malaysian Research Institute on Ageing, in 2015, and Hamid remained as its first director until 2020. The institute spearheaded research programmes and established postgraduate programmes in social gerontology, medical gerontology, and gerontechnology, which attracted local and international students. As a professional in the field of gerontology, Hamid sits in several national and international committees related to population aging. She is a Fellow of the Academy of Science Malaysia and is actively involved in civil society organisations related to older persons and social welfare development in Malaysia. She was an independent director of the Private Pension Administration Malaysia (2020–2024), and was appointed as chairperson from 25 June 2024 until 2026.

Mirza HASANUZZAMAN

Department of Agronomy
Sher-e-Bangla Agricultural University
Sher-e-Bangla Nagar, Dhaka, Bangladesh



Membership Section 01. Agriculture, Nutrition & Food Systems Sciences

Born in Brahmanbaria, Bangladesh, on 10 September 1978.

Hasanuzzaman is a professor of agronomy at Sher-e-Bangla Agricultural University, in Dhaka, Bangladesh. He earned his PhD at Ehime University, Japan, and completed his postdoctoral research at the University of the Ryukyus, Okinawa, Japan. Subsequently, he became an adjunct senior researcher at the University of Tasmania. Hasanuzzaman has more than 400 Scopus-indexed publications, of which more than 250 in the Web of Science. His publications are cited over 31,500 times as per Scopus with an h-index of 91 (as of June 2025). He is an editor and a reviewer for more than 80 peer-reviewed international journals and the recipient of Publons Peer Review Award (in 2017, 2018, and 2019). In 2014, he received the TWAS Young Scientist Award. He was also awarded the University Grants Commission Gold Medal, the Bangladesh Academy of Sciences Gold Medal Award, the Global Network of Bangladeshi Biotechnologists Award and the Society for Plant Research Young Scientist Award. He is a Fellow of the Bangladesh Academy of Sciences, the Royal Society of Biology, and the Linnean Society of London. He was named as a Highly Cited Researcher by Clarivate (2021, 2022).

Monica HEILBRON

Rio de Janeiro State University (UERJ)
Maracanã, Rio de Janeiro, Brazil



Membership Section 07. Earth, Climate & Environmental Sciences

Born in Rio de Janeiro, Brazil, on 18 December 1957.

Heilbron earned a Bachelor of Science (1980) and a Master of Science in geology (1984) from the Federal University of Rio de Janeiro, and a PhD in geosciences from São Paulo University (1993). She carried out postdoctoral studies at the Université du Québec à Montréal, working with uranium-lead dating geochronology (2000–2001), and at Salzburg University, Austria (2018–2019), where she carried out argon-argon geochronology and tectonics. She completed her senior internships at Mainz University, Alberta University at Edmonton, Australian National University in Canberra and Portsmouth University (United Kingdom of Great Britain and Northern Ireland). Presently, she is a member of the Brazilian Academy of Science. In 1983, she joined the Geology Institute of Rio de Janeiro State University (UERJ) as a full professor. Besides teaching, she coordinated the postgraduate programme, and directed the Geology Institute (2003–2006). She served as the provost of postgraduate studies and research (2000–2015), and was appointed director of the International Office of UERJ in 2024. She is head of the GeoAtlantic Institute (National Council for Scientific and Technological Development - CNPq) and of the Tektos Research Group where she develops research and applied projects.

HUANG Jianping

Lanzhou University
Lanzhou, Gansu Province, China



Membership Section 07. Earth, Climate & Environmental Sciences

Born in Xining, China, on 1 November 1962.

Huang is a distinguished professor and founder of the College of Atmospheric Sciences, Lanzhou University, and director at the Collaborative Innovation Center for Western Ecological Safety, Lanzhou University. He is also a member of the Chinese Academy of Sciences, Chinese Meteorological Society, and China National Committee for the International Association of Meteorology and Atmospheric Sciences. His research focuses on semi-arid climate change by combining observations, numerical modelling, and theoretical studies. He established the theoretical framework of a semi-arid climate change mechanism that emphasizes the effects of aerosol-cloud-precipitation, land-atmosphere, and ocean-atmosphere interactions on climate change in semi-arid regions. In recent years, Huang has pioneered a series of studies on the oxygen cycle and land cancer. Additionally, Huang is among the most highly cited researchers for three consecutive years in 2021, 2022, and 2023 according to Clarivate, with an h-Index of 73. He has received several awards for his research achievements, including the Second Prize of National Natural Science Award in 2013 and the First National Innovation Award in 2017.

JIA Weiping

Shanghai Diabetes Institute
Shanghai Sixth People's Hospital
Shanghai, China



Membership Section 03. Medical & Health Sciences

Born in Zhenjiang, Jiangsu Province, China, on 20 November 1956.

Jia is an academican of the Chinese Academy of Engineering, a professor, and an endocrinologist. She works in the Shanghai Sixth People's Hospital affiliated with Shanghai Jiao Tong University School of Medicine, as director of the Shanghai Diabetes Institute and of the Proactive Healthcare Institute, at Shanghai Jiao Tong University. She focuses on the prediction, prognosis, and care of diabetes and related metabolic disorders. She has revealed the prevalence of diabetes and its complications in China, identified diabetes-susceptible genes in Chinese populations, established reference values of Continuous Glucose Monitoring, discovered the associations of FGF21 hormone with nonalcoholic fatty liver disease in humans, innovated artificial intelligence screening systems on diabetic retinopathy, and developed a diabetes integrated care model with digital medicine. She has published over 300 original articles in journals, including *BMJ*, *Nature Medicine*, *Nature Metabolism*, *Cell Metabolism*, *Science Translational Medicine*, *Lancet Diabetes & Endocrinology*, *Diabetes Care* and *Diabetes*. She has received the Xiaoren Pan Distinguished Research Award for Epidemiology of Diabetes in Asia, the Ho Leung Ho Lee Prize for Science and Technology, and the National Science and Technology Progress Award.

Khalid Mohammed KHAN

H. E. J. Research Institute of Chemistry
International Center for Chemical and Biological Sciences
University of Karachi, Karachi, Pakistan



Membership Section 04. Chemical Sciences

Born in Nawabshah, Pakistan, on 1 December 1960.

Khan, a leading figure in medicinal chemistry and drug discovery, boasts a remarkable career marked by prestigious accolades and ground-breaking research. He holds a Doctor of Science degree from the University of Karachi. He has received many awards, including Gold Medals from the Pakistan Academy of Sciences and recognition from Elsevier Publishers. His contributions to science have been acknowledged nationally with civil awards and Research Productivity Awards from the Pakistan Council for Science & Technology. Khan's establishment of a cutting-edge laboratory at the University of Karachi's International Center for Chemical and Biological Sciences reflects his dedication to advancing research. Noteworthy achievements include pioneering work on enzyme inhibitors against diabetes, peptic ulcers, and leishmaniasis. He has advanced microwave-assisted synthetic chemistry in Pakistan, simplifying complex reactions. Khan's mentorship of young scholars and publication record demonstrates his commitment to fostering scientific excellence. With over 900 research papers published in reputable journals, his impact on medicinal chemistry is profound and far-reaching.

Lauro Tatsuo KUBOTA

University of Campinas (Unicamp)
Institute of Chemistry
Campinas, SP, Brazil



Membership Section 04. Chemical Sciences

Born in Goioerê, PR, Brazil, on 20 June 1964.

Kubota got his PhD in chemistry from the University of Campinas (Unicamp), Brazil, in 1993. He was a lecturer at São Paulo State University and moved to Unicamp in 1994 as an assistant professor, becoming a full professor in 2009. He was the coordinator of the Central Laboratory of Analytical Chemistry at Unicamp (2002–2008), the research coordinator (2008–2014), and the director (2014–2018) of the Institute of Chemistry at Unicamp. Since 2008, he has coordinated the National Institute on Science and Technology in Bioanalytics. He became a member of the São Paulo State Academy of Science in 2007, the Brazilian Academy of Science in 2010, and a Fellow of the Royal Society of Chemistry in 2014. He received several awards and honours, including the São Paulo State Governor Invention of the Year in 2000, the Zeferino Vaz Academic Recognition Award in 2004 and 2023, the National Order of Scientific Merit, Commander Class, from the Brazilian Presidency in 2011, and the Grã-Cruz level in 2018, and the Rheinboldt-Hauptmann Prize in 2023. He is a member of the editorial board of several journals like *Sensors and Actuators B: Chemical*, *ChemElectroChem*, and others.

LEE Tatia Mei Chun

The University of Hong Kong
Hong Kong, China



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

Born in Hong Kong, China, on 12 August 1963.

Lee obtained her PhD in 1995 from the University of Alberta, Canada. Currently, she is the chair professor of psychological science and clinical psychology at The University of Hong Kong. She is an elected fellow of esteemed international societies, including the Academy of Social Sciences (United Kingdom of Great Britain and Northern Ireland), American College of Professional Neuropsychology, Association for Psychological Science, and American Psychological Association. She is a member of the International Neuropsychological Society's board of directors and the founding chair of the Clinical Neuropsychological Society under the Chinese Cognitive Science Society of China. She has received numerous awards and recognitions, including the University of Alberta Alumni Horizon Award, the Fulbright Hong Kong Scholar, the State Scientific and Technological Progress Award, and the Humanities and Social Sciences Panel Prestigious Fellowship Award. Acknowledging her substantial contributions and academic achievements in advancing neuropsychological sciences, The University of Hong Kong bestowed her the May Endowed Professorship in Neuropsychology.

Ischia LOPES-CENDES

Department of Medical Genetics and Genomic Medicine
School of Medical Sciences
University of Campinas (Unicamp)
Campinas, SP, Brazil



Membership Section 03. Medical & Health Sciences

Born in Coqueiral, MG, Brazil, on 4 April 1964.

Lopes-Cendes is a physician who earned her medical degree at the University of Campinas (Unicamp), Brazil. She completed her specialty training in pediatrics before obtaining her Master of Science and PhD in neuroscience at McGill University, Canada. Her research focuses on neurogenetics, specifically epilepsies, with a keen interest in the molecular mechanisms underlying the disease. Using advanced multi-omics techniques, her team is renowned for its expertise in next-generation sequencing, bioinformatics analysis of complex genomic data, non-coding RNAs, and single-cell methodologies. For her scientific achievements, Lopes-Cendes has received numerous awards and distinctions including membership in the Brazilian Academy of Sciences. She founded the Brazilian Initiative on Precision Medicine (www.bipmed.org), launching Latin America's first public genomic database, and contributing to the development of LatinGen (www.latingen.org), a platform for sharing genetic and genomic information in the region. These projects have laid the groundwork for adopting genomic testing in Brazil. Beyond her research, she is an attending physician at Unicamp University Hospital.

MA Guanghui

State Key Laboratory of Biochemical Engineering
Institute of Process Engineering
Chinese Academy of Sciences
Zhong Guan Cun, Haidian District, Beijing, China



Membership Section 05. Engineering

Born in Shanghai, China, on 28 September 1964.

Ma is serving as director of the State Key Laboratory of Biochemical Engineering, Institute of Process Engineering, Chinese Academy of Sciences. She is an academican with both the Chinese Academy of Sciences and TWAS, as well as a fellow of the American Institute for Medical and Biological Engineering. In 1993, she received her PhD degree from Tokyo Institute of Technology, Japan. Her research interests focus on the preparation of uniform microspheres and microcapsules, and their applications in biochemical engineering and biomedicine engineering, such as biochemical separation media, drug carriers, vaccine delivery systems (adjuvants), microcarriers for cell culture, and enzyme immobilization carriers.

Sergei MOSYAKIN

M.G. Kholodny Institute of Botany
 National Academy of Sciences of Ukraine
 Kyiv, Ukraine



Membership Section 02. Biological Sciences

Born in Kyiv, Ukraine, on 30 November 1961.

Mosyakin is the director of the M.G. Kholodny Institute of Botany, National Academy of Sciences (NAS) of Ukraine (Kyiv, Ukraine), as well as the head of the Vascular Plants Department. Since September 2011, he has been the president of the Ukrainian Botanical Society; head of the plants subcommittee of the National Commission on the Red Data Book of Ukraine; editor-in-chief of the *Ukrainian Botanical Journal*; member of the editorial boards of *Botanica* (Lithuania), *Biodiversity Research and Conservation* (Poland), and other botanical periodicals. He is a corresponding member of NAS of Ukraine (2012), holds a Doctor of Sciences degree in biological sciences (2003) from M.G. Kholodny Institute of Botany, and has been a professor of botany since 2006. He was awarded by NAS of Ukraine "For Professional Achievements" (2011) and "For Scientific Achievements" (2021). The Ministry of Education and Science of Ukraine bestowed him for his educational achievements with the Petro Mohyla (2008) and Sofia Rusova (2005) awards. His main research interests include plant taxonomy, biogeography and ecology, botanical nomenclature, biodiversity conservation, and science education.

Sohail NADEEM

Department of Mathematics
 Quaid-i-Azam University
 Islamabad, Pakistan



Membership Section 08. Mathematical Sciences

Born in Pakpattan Sharif, Pakistan, on 15 March 1975.

Nadeem is a tenured professor in the Mathematics Department at Quaid-i-Azam University. He is an outstanding researcher and teacher, skilled in administrative duties. His research areas include peristaltic motion, blood flow through stenosis arteries, computational techniques, Newtonian and non-Newtonian fluids, stretching and shrinking phenomena, stagnation flows, and analytical techniques to solve highly nonlinear differential equations. The main area of Nadeem's work is applied mathematics. He has considered highly nonlinear physical problems of applied nature obtaining their exact, analytical, and numerical solutions. He is an expert in analytical and numerical techniques. Nadeem has published more than 700 research papers in international journals of high impact factor. His impact factor is greater than 2,000 and his citations are over 30,000. He has received many awards including Sitara-i-Imtiaz, Tamgha-i-Imtiaz, Salam Prize, Best Young Researcher, Best Teacher, Pakistan Academy of Sciences Gold Medal, Raziuddin Gold Medal, Pakistan Council for Science and Technology Awards, TWAS Young Affiliate, Fellow of Pakistan Academy of Sciences, and Obada Prize, and has supervised 34 PhD and 120 Master of Philosophy Graduates.

Harini NAGENDRA

Azim Premji University
 Sarjapura, Bengaluru, India

Membership Section 07. Earth, Climate & Environmental Sciences

Born in Salem, Tamil Nadu, India, on 15 May 1972.

Nagendra is the director of the School of Climate Change and Sustainability, Azim Premji University, in Bangalore, India. Her research covers forest conservation and urban sustainability. Her interdisciplinary work on forests combines remote sensing, biodiversity and institutional analysis, to elucidate the pattern-process link in human-dominated tropics. Her urban research spotlights city commons and ecosystems, to determine the resilience and wellbeing of the poor in the global South. Her awards include an honorary doctorate from Utrecht University in 2025, the 2009 United States of America National Academy of Sciences Cozzarelli Prize, 2013 Elinor Ostrom Senior Scholar award, and 2017 Clarivate Web of Science award. She is a well-known public speaker and writer, whose books include *Nature in the City: Bengaluru in the Past, Present and Future*; *Cities and Canopies: Trees of Indian Cities*; *Shades of Blue: Connecting the Drops in India's Cities*; and *Bangalore Detectives Club* series. She was a lead author of Intergovernmental Panel on Climate Change's Fifth Assessment Report (AR5), and is on the scientific committee of the Future Earth Program for Ecosystem Change and Society, and the Advisory Board of the World Resources Institute's Ross Center for Sustainable Cities; the Future Earth Urban Knowledge Action Network; and the Climate-KIC (Knowledge and Innovation Community) of the European Institute of Innovation and Technology.



Chukwumerije OKEREKE

School of Policy Studies
 University of Bristol
 Bristol, United Kingdom of Great Britain and Northern Ireland

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

Born in Okpanku, Nigeria, on 20 April 1971.

Okereke is a professor of global climate governance and public policy at the School of Policy Studies, University of Bristol, United Kingdom of Great Britain and Northern Ireland. He is a visiting professor at the London School of Economics and a senior academic visitor at the University of Oxford. He was previously the director of the Center for Climate Change in Alex Ekwueme Federal University, Nigeria, co-director of the Center for Climate and Justice, and co-director of the Leverhulme Doctoral Scholarship Programme, both at the University of Reading. He also served as the director of the Center for Climate Change and Development at the Smith School of Enterprise and the Environment, at the University of Oxford. A globally recognized leading scholar on global climate governance and international development, Okereke was the coordinating lead author of the United Nations' Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report, Working Group 3.



Anthony Ifeanyin OKOH

SAMRC Microbial Water Quality Monitoring Centre
Department of Biochemistry and Microbiology
University of Fort Hare
Alice, South Africa



Membership Section 02. Biological Sciences

Born in Agbor, Nigeria, on 16 October 1963.

Okoh holds a PhD in microbiology from Obafemi Awolowo University in Nigeria, with over 30 years of experience in the university system. He was the head of the Department of Biochemistry and Microbiology, University of Fort Hare, South Africa for seven years, leader of the Water Research Niche Area, deputy dean, and acting dean, as well as director of a research centre of excellence of the South African Medical Research Council, University of Fort Hare, South Africa. His research interests focus on applied and environmental microbiology. He has published over 500 journal articles and graduated 59 PhD and 70 master's degree students. He is a recipient of the Gold Scientific Achievement Award of the South African Medical Research Council, amongst others. He also served as the president of the South Africa Society for Microbiology (2011–2013) and is a member of the board of trustees of the Biotechnology Society of Nigeria, and a Fellow of seven national and international societies and academies. In the recent *World Scientist and University Ranking 2025*, in the discipline microbiology, Okoh was ranked first in the University of Fort Hare, second in South Africa and Africa, and 125th globally.

Youssef OUKNINE

Cadi Ayyad University
Faculty of Sciences Semailia
Marrakesh, Morocco



Membership Section 08. Mathematical Sciences

Born in Taadadate, Morocco, on 31 December 1958.

Ouknine is a full professor of mathematics at Cadi Ayyad University, Marrakesh, Morocco. His work focuses on probability theory and stochastic calculus. He has published more than 167 scientific articles in reputed international peer-reviewed journals such as *Annals of Probability*, *Annals of Applied Probability*, *Stochastic Processes and their Applications*, *Electronic Journal of Probability*, *Electronic Communications in Probability*, and *Journal of Theoretical Probability*. He has been a referee and co-editor of several scientific journals ranking high at the international level. He is also one of the initiators of international meetings in stochastic analysis and probability theory as well as several training schools in stochastic process theory in Morocco. He has been a resident member of the Hassan II Academy of Science and Technology, in Morocco, since 2006.

Hem Raj PANT

Department of Applied Sciences and Chemical Engineering
Institute of Engineering
Tribhuvan University
Kathmandu, Nepal



Membership Section 04. Chemical Sciences

Born in Uchchakot Doti, Nepal, on 2 November 1972.

Pant earned his PhD from Jeonbuk National University, South Korea, in 2011. He is a pioneering chemist of Nepal and made a significant contribution towards fabricating advanced polymer and ceramic nanomaterials that have potential applications in the biomedical field and environmental remediation. His research on nanotechnology for the fabrication of hierarchical nanomembrane and nanoparticles using top-down and bottom-up approaches has greatly enhanced global knowledge in the field of advanced nanomaterials. He has been teaching and doing research for three decades, becoming a leader in the materials science and engineering discipline. Pant has published 88 articles in journals ranked in the Science Citation Index/Science Citation Index Expanded (SCI/SCIE) and has 5,400 citations with h-index of 43. He has more than 100 conference proceedings and non-ranked journal publications and is the author of 14 books and book chapters in chemistry and materials science. He is the editor of four SCI/SCIE journals and the reviewer of about 60 ranked journals. Currently, Pant is working as vice-chancellor of Far Western University, Nepal.

Giorgio PARISI

Accademia Nazionale dei Lincei
Rome, Italy



Membership Section 09. Physics, Astronomy & Space Sciences

Born in Rome, Italy, on 4 August 1948.

Parisi is a theoretical physicist born in 1948, and a former student of the Italian physicist Nicola Cabibbo. From 2018–2021 he was president of the Accademia dei Lincei, and now is a member of various academies including the American Philosophical Society. In 2021 he received the Nobel Prize in Physics “for the discovery of the interplay of disorder and fluctuations in physical systems from atomic to planetary scales.” He carried out his research activities at the Frascati National Laboratories, first as a fellow of the Italian National Research Council (1971–1973) and later as a researcher at the National Institute for Nuclear Physics (1973–1981). During this time he spent long periods abroad at Columbia University, Institut des Hautes Études Scientifiques and École normale supérieure in Paris. In February 1981, he was appointed full professor of theoretical physics at the University of Rome Tor Vergata, a position that he held until 1992. Since 1992, he has been an emeritus professor at the University of Rome La Sapienza. His contributions cover many areas of theoretical physics, including particle physics, statistical mechanics, fluid dynamics, condensed matter physics, and scientific computer constructions. He has also published some papers on neural networks, the immune system, and starling flight.

Eduardo RIOS-NETO

Federal University of Ouro Preto
Minas Gerais, Brazil

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

Born in Belo Horizonte, Brazil, on 11 February 1956.

Rios-Neto is a visiting professor in the applied economics graduate programme at the Federal University of Ouro Preto. From April 2021 to December 2022, he served as the president of the Brazilian National Institute of Geography and Statistics (IBGE), and from May 2019 to March 2021 he was the director of surveys at IBGE. A member of the Brazilian Academy of Sciences, he was a distinguished Lemann Visiting Professor at the University of Illinois Urbana-Champaign (2015–2016). In 2015, he retired as a full professor of demography at the Center for Regional Development and Planning (Cedeplar) of the Federal University of Minas Gerais, where he served from 1980. In 2010, he received the Brazilian Federal Government Medal of Scientific Merit, and in 2006 he was appointed as Tinker Professor at the University of Texas at Austin. From 2004–2011 he was president of the National Committee on Population and Development, and from 1999–2002 he was president of the Brazilian Population Association. From 1996–2000, he served as graduate training director in demography at Cedeplar. In 1996, he carried out postdoctoral research in demography at the University of Texas, Austin. He earned his PhD in demography from the University of California at Berkeley.



Mohd Sapuan SALIT

Department of Mechanical and Manufacturing Engineering
Universiti Putra Malaysia
Serdang, Selangor, Malaysia

Membership Section 05. Engineering

Born in Perak, Malaysia, on 25 September 1965.

Salit is a professor (Grade A) of composite materials at the Department of Mechanical and Manufacturing Engineering, Universiti Putra Malaysia (UPM). He earned a Bachelor of Engineering in mechanical engineering at University of Newcastle, Australia, a Master of Science in engineering design at Loughborough University, United Kingdom of Great Britain and Northern Ireland (UK), and a PhD in material engineering at De Montfort University (UK). He is a professional engineer, and a Fellow of the Society of Automotive Engineers International, the Academy of Sciences Malaysia, the International Academy of Bionic Science, the International Artificial Intelligence Industry Alliance, the International Society for Development and Sustainability, the Plastic & Rubber Institute Malaysia, the Malaysian Scientific Association, and the Institute of Materials, Malaysia. He is an honorary member of the Asian Polymer Association and founding chairman and honorary member of the Society of Sugar Palm Development and Industry, Malaysia. He was the recipient of a TWAS Award in Engineering Sciences, and of the William Johnson International Gold Medal.



Shamala Devi SEKARAN

UCSI Hospital
Malaysia

Membership Section 03. Medical & Health Sciences

Born in Johor Bahru, Malaysia, on 16 February 1954.

Sekaran, Research Associate at UCSI Hospital, is a Fellow of the Academy of Science Malaysia (since 2017) and of the Royal Society of Pathologists, London (since 2019). Her main expertise is in infectious diseases, with more than 270 published papers, over 6,000 Web of Science citations, and an h-index of 42. To date, 24 master's degree and 23 PhD students have graduated under her supervision. The main areas of investigation are on Dengue and other infectious organisms. She has received multiple awards for kits developed, owns more than 20 patents, and was awarded Woman Bioinnovator of the year (2008) and "Anugerah Inovasi Negara 2009 for Molecular Diagnostics of Dengue Infections". She investigates the effects of diabetes and obesity on severe dengue, setting up serological assays to differentiate flaviviruses and vaccine development. Recently, she ventured into stem cells for regenerative medicine. She directed a World Health Organization collaborating centre (2003–2007). She is a member of the faculty committee for postgraduate degrees, counsellor and coordinator for various degree programmes. Sekaran was also the head of the virology diagnostic laboratory at the University Malaya Medical Centre (2001–2007).



Kadambot SIDDIQUE

The University of Western Australia
The UWA Institute of Agriculture
Crawley, WA, Australia

Membership Section 01. Agriculture, Nutrition & Food Systems Sciences

Born in Kodungalore, India, on 20 November 1955.

Siddique obtained his PhD in 1985 from The University of Western Australia (UWA). Currently Hackett Professor of Agriculture Chair, and Director, The UWA Institute of Agriculture. He is a Fellow of the Pakistan Academy of Sciences, the African Academy of Sciences, the Indian National Academy of Agricultural Sciences, the Agriculture Institute of Australia and the Australian Academy of Technological Sciences and Engineering. He was designated by the Food and Agriculture Organization of the United Nations as special ambassador for the International Year of Pulses 2016. Highly Cited Researcher in 2019–2023 in Agricultural Sciences and double Highly Cited Researcher 2021, 2023 in Agricultural Sciences and Plant & Animal Science (Thomson Reuters/Clarivate Analytics). Siddique is the recipient of national and international awards. In 2025 was bestowed Doctor of Science (Honoris Causa) by Kerala Agricultural University, India, and 2024 Crawford Fund Medal in recognition of considerable and continued contribution to international agricultural research through the Crawford Fund's programmes and related activities. He was named 2023 Scientist of the Year at the Western Australian Premier's Science Awards.



Abdolreza (Arash) SIMCHI

Sharif University of Technology
 Tehran, Islamic Republic of Iran



Membership Section 05. Engineering

Born in Tehran, Islamic Republic of Iran, on 4 March 1969.

Simchi earned his PhD from Sharif University of Technology, Islamic Republic of Iran in 2001. He is a distinguished/exemplary professor of materials science and has been honoured with several national and international recognitions for outstanding teaching, research, and service awards. He was the director of the International Office of Sharif University. He received numerous prizes including the George Foster Research Award, Germany; the Materials Award by the European Powder Metallurgy Association; Best Young Inventor by the World Intellectual Property Organization, United Nations; and the Kharazmi International Award and Alameh-Tabatabaie Award, Islamic Republic of Iran. He is a member of the National Elite Foundation and an awardee of the Alexander von Humboldt Foundation. For the last seven years he has been featured in the list of the world's most cited researchers by Clarivate, as well as by Stanford University in the fields 'Enabling & Strategic Technologies' and 'Materials'.

Rekha S. SINGHAL

Institute of Chemical Technology
 Matunga, Mumbai, India



Membership Section 01. Agriculture, Nutrition & Food Systems Sciences

Born in Mumbai, India, on 7 February 1962.

Singhal earned her PhD in 1990 from the Institute of Chemical Technology, Mumbai, India, where she is now a professor. She received fellowships from the Indian National Science Academy, the Indian National Academy of Engineering, the National Academy of Sciences India, the International Bioprocessing Association, and the Association of Food Scientists and Technologists (India). She was a member of scientific panels and working groups, in the Food Safety and Standards Authority of India, and a member of the subject expert committee of national bodies of the Government of India, including Biotechnology Industry Research Assistance Council, Department of Science & Technology, University Grants Commission, Department of Biotechnology, and Technology Development Board. She is a project evaluator for the European Science Foundation, was an associate editor with *Carbohydrate Polymers*, and is an associate editor with *Sustainable Food Technology*. She was a chairperson of the Research Council, Central Food Technological Research Institute of Council of Scientific and Industrial Research (CSIR), and is a former member of the Research Council, CSIR- National Institute for Interdisciplinary Science and Technology. She is a subject expert with the National Board of Accreditation and works in interdisciplinary areas encompassing chemical sciences, in particular, food chemistry, biological sciences, and engineering sciences, where she works with separation techniques, using supercritical carbon dioxide and chromatography.

Antonio SOUZA FILHO

Universidade Federal do Ceará
Departamento de Física
Fortaleza, Ceará, Brazil



Membership Section 09. Physics, Astronomy & Space Sciences

Born in Jucás, Brazil, on 12 June 1975.

Souza Filho was born in 1975, in Jucás, Brazil, and received his doctorate in physics from the Federal University of Ceará, Fortaleza, Brazil, in 2001. In 2000, he joined the group of Mildred Dresselhaus at the Massachusetts Institute of Technology as a PhD visiting student, where he worked on single carbon nanotube resonance Raman spectroscopy. He has authored and co-authored about 270 papers in refereed international journals including review articles, book chapters, and books. He is currently a full professor of physics at the Federal University of Ceará, Brazil. He was one of the recipients of the 2009 Sômiya Prize awarded by the International Union of Materials Research Societies (IUMRS) and elected Fellow of the Brazilian Academy of Science in 2018. His main research interests are the electronic and optical properties of nanomaterials with emphasis on carbon nanostructures.

Miriam Cristina Del Milagro STRUMIA

Universidad Nacional de Córdoba
Córdoba, Argentina



Membership Section 04. Chemical Sciences

Born in Córdoba, Argentina, on 23 March 1956.

Strumia is an emeritus professor of chemistry, Faculty of National University of Córdoba, and superior investigator of the National Scientific and Technical Research Council, Argentina. Strumia has directed 15 doctoral and four master's theses and has more than 165 scientific international publications in the field of polymer and dendritic chemistry. Her main research interest are the synthesis and chemical modification to obtain new functional materials or hybrid nanomaterials with specific application properties. She was elected as a member of the National Academy of Sciences in 2019. During her scientific career she has received important awards such as: INNOVAR 2007 (mention in the Applied Chemistry category), INNOVAR 2010 (mention in the Technology Linkage and Transfer category) of the National Ministry of Education, Science and Technology and the National Ministry of Economy and Production; Award for Scientific Career on the Day of Women and Girls in Science awarded by the Ministry of Science and Technology of the Province of Córdoba (2022); Konex 2023 Award in Science and Technology; Diploma of Merit (September 2023) and Konex Platinum Award (October 2023) in the area of Organic Chemistry.

TANG Tao

Institute of Advanced Study
BNU-HKBU United International College
Zhuhai, Guangdong Province, China



Membership Section 08. Mathematical Sciences

Born in Anhui, China, on 22 May 1963.

Tang obtained his Bachelor's degree in mathematics from Peking University in 1984, and his PhD in applied mathematics from the University of Leeds, in 1989. From 2015 to 2019, he was the vice-president and provost at the Southern University of Science and Technology (SUSTech). From 2019 to 2024, he served as the president of Beijing Normal University-Hong Kong Baptist University United International College (UIC). Professor Tang was widely known for his expertise in the fields of computational mathematics and computational fluid dynamics. In recent years, his research has been focusing on adaptive grid methods, high-order methods for PDEs, and numerical methods for phase-field equations. Tang is a member of the Chinese Academy of Sciences, and a Fellow of the European Academy of Sciences. He is also a Fellow of the Society for Industrial and Applied Mathematics (SIAM) and a Fellow of the American Mathematical Society. In 2018, he was asked to deliver an invited lecture at the International Congress of Mathematicians.

Yahya TAYALATI

Université Mohammed V, Faculté des Sciences
Rabat, Morocco



Membership Section 09. Physics, Astronomy & Space Sciences

Born in Jerada, Morocco, on 16 August 1971.

Tayalati, a high-energy physicist, earned his PhD from the University Mohammed First in Morocco. He contributed significantly to the ANTARES collaboration, focusing on neutrino telescope deployment and the search for exotic particles. For over two decades, Tayalati focused on the ATLAS collaboration, he played a key role in the construction of the Liquid Argon Presampler and contributed to ground-breaking research on light-by-light scattering. By building collaborations with the KM3NeT neutrino telescope and the ATLAS High Granularity Timing Detector, Tayalati showcased Morocco's role in cutting-edge particle physics. Recognized as an honorary fellow of the Islamic World Academy of Sciences and a fellow of the African Academy of Sciences, he received the Fulbright fellowship (2011), the Kuwait AFESD fellowship (2021), and the TWAS-AREP award (2022). In 2021, he was honoured with the prestigious Mustafa Prize for his significant contribution to physics research and scientific development. With his leadership and expertise, Tayalati continues to shape the landscape of particle physics research, driving towards a deeper understanding of the fundamental principles of the Universe.

Michael Alexander TAYLOR

Faculty of Science and Technology
University of the West Indies
Mona, Kingston, Jamaica, WI



Membership Section 07. Earth, Climate & Environmental Sciences

Born in St. Andrew, Jamaica, on 21 July 1971.

Taylor earned his PhD from the University of Maryland, College Park, United States of America, in 1999. He is a professor of climate science and dean of the Faculty of Science and Technology at the Mona Campus of The University of the West Indies. He is a fellow of the Caribbean Academy of Science, and the co-director of the Climate Studies Group, Mona (CSGM), which is a center of regional thought and expertise in climate change science for small islands and the wider Caribbean. He has served on several national and regional (Caribbean) committees and advisory boards related to climate change science and its impacts on the Caribbean. Most recently, he was appointed to the climate change advisory board of the Government of Jamaica. He is a coordinating lead author for chapter 3 of the special report on 1.5 degrees of the Intergovernmental Panel on Climate Change. He has received the Silver Musgrave Medal for Science from the Institute of Jamaica and is the 2019 Laureate of the Anthony N. Sagba Award, Caribbean Excellence.

Marisol TOLEDO

Universidad Autónoma Gabriel René Moreno
Santa Cruz de la Sierra, Plurinational State of Bolivia



Membership Section 02. Biological Sciences

Born in Santa Cruz de la Sierra, Plurinational State of Bolivia, on 6 June 1970.

Toledo, a Bolivian biologist who earned a PhD in 2010 from Wageningen University and Research, Kingdom of the Netherlands, is a professor, researcher, and laboratory coordinator in the Biology Department at Gabriel René Moreno University in Santa Cruz, Bolivia. She held the position of botanist in the BOLFOR project, research coordinator in the Bolivian Institute of Forest Research, and executive director at Noel Kempff Mercado Museum of Natural History. Toledo studied the vegetation diversity and structure, and the plants used by indigenous peoples in the Bolivian lowlands. From her participation in several projects, she obtained many publications, including book chapters, books, and scientific papers. She also presented results at (inter)national congresses and has made contributions to human resource development by supervising graduate students and training local people. She was chief editor of the *Journal of the Bolivian Botany Society* and the *Kempffiana Journal*. Currently, Toledo is a member of the Academy of Sciences of Bolivia; National Advisory Committee of the Critical Ecosystem Partnership Fund; and in international research networks (RAINFOR, 2ndForests).

Romildo Dias TOLEDO FILHO

Universidade Federal do Rio de Janeiro (UFRJ)
Centro de Tecnologia 2 (CT 2)
Rio de Janeiro, RJ, Brazil



Membership Section 05. Engineering

Born in Taperoá (PB), Brazil, on 15 December 1960.

Toledo Filho is a full professor of materials and structures at Coppe-Federal University of Rio de Janeiro (PEC/COPPE/UFRJ), Brazil. He is a member of the Brazilian Academy of Sciences, of the National Academy of Engineering, Researcher 1A with the Brazilian National Council for Scientific and Technological Development (CNPq), and a senior scientist of the Carlos Chagas Foundation (FAPERJ), Rio de Janeiro State. He is the chief executive officer of the Science Park of UFRJ, head of the Sustainability Center for Research and Education on Environmental Friendly Materials and Technologies (NUMATS) of the Federal University of Rio de Janeiro, member of the INBAR construction task force and vice-president of the Brazilian Society for Non-Conventional Materials. He has conducted extensive research on sustainable materials for construction, decarbonisation of the construction industry, vegetable fibre-reinforced cement composites, bamboo materials characterization, and structural use, cement replacement by bioashes and the use of waste materials in the construction industry.

Judith Ndongo Embola TORIMIRO

University of Yaounde 1
&
Centre International de Référence Chantal Biya pour la Recherche et de
la prise en charge du VIH/SIDA (CIRCB)
Cameroon



Membership Section 03. Medical & Health Sciences

Born in Ekona, Cameroon, on 26 December 1963.

Torimiro holds a PhD and a Master of Science degree in applied molecular biology of infectious diseases from the London School of Hygiene and Tropical Medicine, United Kingdom of Great Britain and Northern Ireland. Previously, she obtained a master's degree in chemical pathology from the University of Ibadan, and a bachelor's degree in chemistry from the University of Lagos, Nigeria. She pursued her postdoctoral training in molecular epidemiology of HIV, HBV, HCV and human genes at the Johns Hopkins Bloomberg School of Public Health, and other institutions in the United States of America. She is chair of the Department of Biochemistry and coordinator of the Postgraduate School Unit for Health and Environmental Sciences, University of Yaoundé I, Cameroon. She is the laboratory director at the Chantal Biya International Reference Centre for AIDS Research (CIRCB) in Yaoundé, Cameroon. Torimiro has earned recognition from the World Health Organization that bestowed on her the 2019 Sasakawa Health Prize, the prize from the Commonwealth Secretariat for women's health for her work on sexually transmitted infections among pregnant women. She currently leads a network in Africa called MIChep B, to promote the prevention of mother-to-child transmission of hepatitis B.

Avesh Kumar TYAGI

Homi Bhabha National Institute
 Mumbai, India

Membership Section 04. Chemical Sciences

Born in Meerut, India, on 25 June 1964.

Tyagi joined the Chemistry Division, Bhabha Atomic Research Centre (BARC), in 1986 through the BARC Training School. He obtained his PhD in 1992, then did postdoctoral research at Max Planck Institute, Stuttgart, Germany (1995–96). Presently, he is dean and a senior professor at Homi Bhabha National Institute (HBNI), Mumbai; and honorary professor at the Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru. His research interests are in the field of nanomaterials, and also functional, metastable, and hybrid materials. He has published about 680 papers in international journals and 16 books and supervised 40 PhD students. He has received many prestigious awards including the DAE-Homi Bhabha Science and Technology Award, Materials Research Society of India (MRSI) Medal; MRSI-ICSC Materials Science Senior Award; MRSI-CNR Rao Prize in Advanced Materials; Chemical Research Society of India (CRSI) Bronze Medal; CRSI-CNR Rao National Prize in Chemical Sciences; CRSI-Silver Medal; Rajib Goyal Prize in Chemical Sciences; Metallurgist of the Year award from Ministry of Steel, GoI; National Prize in Solid State and Materials Chemistry; ISCA Acharya PC Ray Memorial Award and NETZSCH – ITAS Award by Indian Thermal Analysis Society, Lifetime Achievement Award from Rare Earth Association of India, and Vigyan Shri award from Government of India.



Ambroise WONKAM

McKusick-Nathans Institute and Department of Genetic Medicine
 Johns Hopkins University School of Medicine
 Baltimore, MD, United States of America

Membership Section 03. Medical & Health Sciences

Born in Bafoussam, Cameroon, on 8 December 1969.

Wonkam is a professor of genetic medicine, and director of the McKusick-Nathans Institute and Department of Genetic Medicine, Johns Hopkins University School of Medicine, Baltimore, United States of America. He is also director of GeneMAP (Genetic Medicine of African Populations), and immediate past-deputy dean of research at the Faculty of Health Sciences, University of Cape Town, South Africa. After a Medical Doctor degree with the Faculty of Medicine and Biomedical Sciences, University of Yaoundé I, Cameroon, he has completed a doctorate in medical sciences (cell biology) at the University of Geneva, Switzerland, and a PhD in human genetics at the University of Cape Town, South Africa. Wonkam also trained as a medical geneticist in genetic medicine at the University of Geneva. His scientific results are reflected in more than 230 peer-reviewed publications. His research focuses on genetic and genomic variations in the African population with a focus on 1) Genomics modifiers of Sickle Cell Disease (SCD); 2) Genetics of hearing impairment, and 3) Ethical, equity, and educational issues in genetic medicine research. Wonkam is president of the African Society of Human Genetics.



YAN Xiyun

Institute of Biophysics
Chinese Academy of Sciences
Chaoyang District, Beijing, China



Membership Section 02. Biological Sciences

Born in Kaifeng, Henan Province, China, on 25 February 1957.

Yan (CAS Engineering Laboratory for Nanozyme, Institute of Biophysics, Chinese Academy of Sciences) is a member of the Chinese Academy of Sciences, focusing on precision cancer treatment. She introduced the concept of “nanozyme” and used nano-materials as enzyme mimics to create new methods for tumor diagnosis and nanozyme-strip for rapid local detection of infectious diseases. She has also established the standard for determining nanozyme catalytic activity, founded Nanozyme Academic Subgroup of Biophysical Society of China and developed world's first nanozyme product. Yan's original research on nanozyme has paved the way for the emergence of the interdisciplinary field of nanozymes, bridging the disciplines of enzymology, chemistry, materials science, biology, and medicine. Now, more than 1,000 nanozymes have been reported by 490 laboratories across 40 countries. The significance of nanozymes has been acknowledged by Clarivate, which designated it as a “key hot frontier” in 2022. Additionally, the International Union of Pure and Applied Chemistry (IUPAC) recognized nanozyme as one of the top ten new technologies in 2022.

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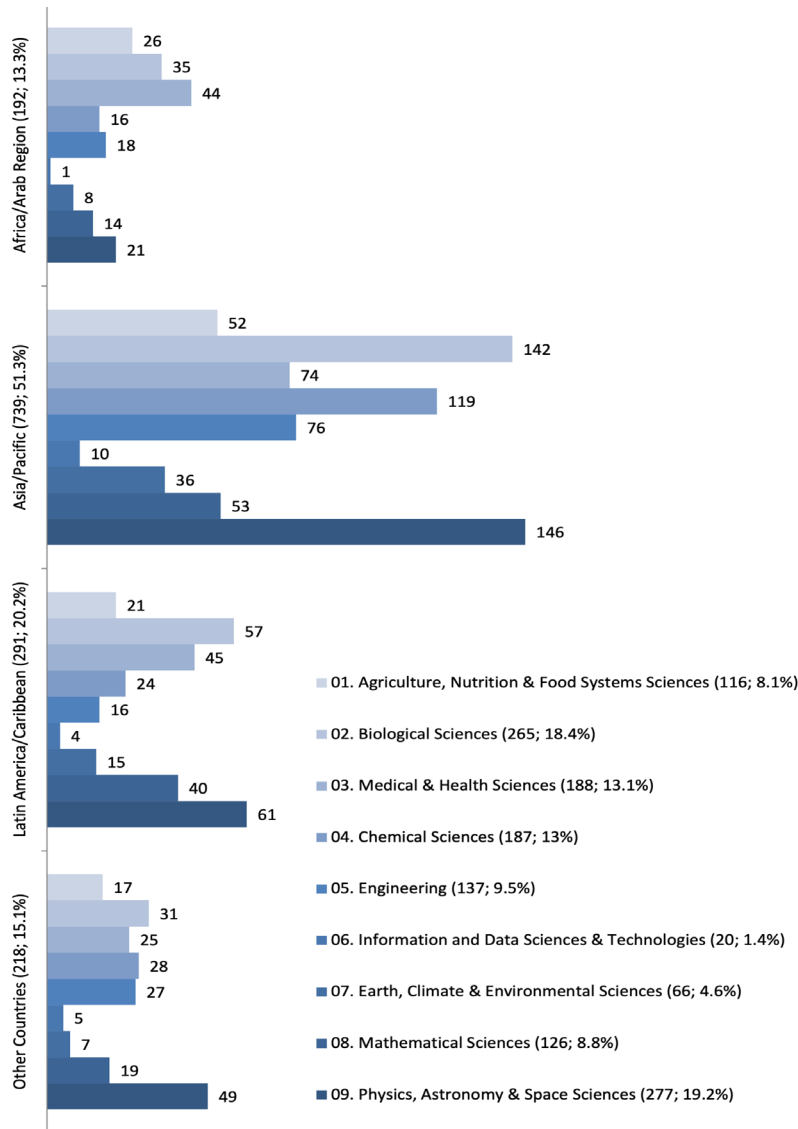
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- The Chinese Academy of Sciences in Beijing, China
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- The Brazilian Academy of Sciences in Rio de Janeiro, Brazil.



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