

2023 NEWLY ELEVATED FELLOWS

*Amir G Aghdam  
Concordia University  
Montreal QC Canada*

*for research leadership in distributed control of large-scale interconnected systems*

*Gail-Joon Ahn  
Arizona State University  
Tempe AZ USA*

*for development of applications of information and systems security*

*Jaleel Akhtar  
Indian Institute of Technology Kanpur  
Kanpur Uttar Pradesh India*

*for contributions in microwave planar sensors and nano-composites-based microwave absorbers*

*Bilal Akin  
University of Texas at Dallas  
Richardson TX USA*

*for contributions to control, diagnosis and condition monitoring of AC drives*

*Kemal Akkaya  
Florida International University  
Miami FL USA*

*for contributions to routing and topology management in wireless ad hoc and sensor networks*

*Walid Y Ali-Ahmad  
Apple Inc.  
San Carlos CA USA*

*for leadership in development of low-cost direct-conversion cellular RF systems*

2023 NEWLY ELEVATED FELLOWS

*Nima Amjady  
Semnan University  
Semnan Iran*

*for contributions to uncertainty modeling and forecasting for power systems*

*Jason H Anderson  
University of Toronto  
Toronto ON Canada*

*for contributions to high-level synthesis and low-power FPGAs*

*Francesco P Andriulli  
Politecnico di Torino  
Turin Italy*

*for contributions to computational electromagnetics*

*Stanley Atcitty  
Sandia National Labs  
Albuquerque NM USA*

*for leadership in advancing power conversion systems for grid energy storage applications*

*Vijayalakshmi Atluri  
Rutgers University  
Hamilton NJ USA*

*for contributions to security and privacy for data and workflow systems*

*Farhan A Baqai  
Apple Inc.  
Fremont CA USA*

*for contributions in leadership in digital camera image processing*

2023 NEWLY ELEVATED FELLOWS

*Joao Barros  
Veniam  
Porto Portugal*

*for contributions to physical-layer security and vehicular networking*

*Ertugrul Basar  
Koc University  
Istanbul Turkey*

*for contributions to physical-layer design for next-generation wireless networks*

*Alexandre M Bayen  
University of California Berkeley  
Berkeley CA USA*

*for contributions to distributed parameter systems control, with applications to mobile sensing and automotive systems*

*Geoffrey Beach  
Massachusetts Institute of Technology  
Cambridge MA USA*

*for contributions to the understanding of magnetoelectric effects, domain wall and skyrmion dynamics in nanostructures*

*Raymond G Beausoleil  
Hewlett Packard Laboratories  
Seattle WA USA*

*for contributions to classical and quantum communication and computation*

2023 NEWLY ELEVATED FELLOWS

*Carolyn L Beck  
University of Illinois  
Urbana IL USA*

*for contributions to model reduction and the analysis of epidemic processes over networks*

*Hassan Bevrani  
University of Kurdistan  
Sanandaj Kordestan Iran*

*for contributions to microgrid control*

*Shekhar Bhansali  
Florida International University  
Miami FL USA*

*for contributions to portable real-time sensing devices for continuous monitoring*

*Zhaohong Bie  
Xian Jiaotong University  
Xian Shaanxi China*

*for contributions to power system reliability and resilience*

*Mark N Billingham  
University of South Australia  
Mawson Lakes South Australia Australia*

*for contributions to augmented and virtual reality*

*Keith A Bowman  
Qualcomm Technologies, Inc.  
Morrisville NC USA*

*for contributions to variation-tolerant adaptive processor designs*

2023 NEWLY ELEVATED FELLOWS

*Michael S Braasch  
GPSofT  
Guysville OH USA*

*for contributions to GPS multipath error characterization and mitigation*

*Maite Brandt-Pearce  
University of Virginia  
Charlottesville VA USA*

*for contributions to optical wireless and fiber communications*

*Alfred M Bruckstein  
Technion International  
Haifa Israel*

*for contributions to signal representation and swarm robotics*

*Concettina Buccella  
University of L'Aquila  
L'Aquila Italy*

*for contributions to the modeling of electric systems and the modulation of multilevel converters*

*Carlos A Busso  
The University of Texas at Dallas  
Richardson TX USA*

*for contributions to speech and multimodal affective signal processing and their technology applications*

*Patrizio Campisi  
Universta' degli Studi Roma Tre  
Roma Italy*

*for contributions to the development of biometrics*

2023 NEWLY ELEVATED FELLOWS

*Srdjan Capkun  
ETH Zurich  
Zurich Switzerland*

*for contributions to wireless and systems security*

*Constantine Caramanis  
University of Texas at Austin  
Austin TX USA*

*for contributions to robust statistics and optimization in high dimensions*

*Norman Chang  
ANSYS, Inc.  
Fremont CA USA*

*for leadership in the physical-level sign-off of Electronic Design Automation for SoC/  
3DIC*

*Yuan-Hao Chang  
Academia Sinica  
Taipei Taiwan*

*for contributions to non-volatile memory reliability*

*Tsung-Hui Chang  
Chinese University of Hong Kong  
Shenzhen Guangdong China*

*for contributions to distributed optimization methods and their applications in signal  
processing and wireless communications*

*Paul C.-P. Chao  
National Yang Ming Chiao Tung University  
Hsinchu Taiwan*

*for contributions to optical bio-imaging and sensing technologies*

2023 NEWLY ELEVATED FELLOWS

*Symeon Chatzinotas*  
*University of Luxembourg*  
*Luxembourg*

*for contributions to precoding technologies for multiple antennas*

*Pavel Cheben*  
*National Research Council of Canada*  
*Ottawa ON Canada*

*for contributions to silicon and metamaterial photonics*

*Haibo Chen*  
*Shanghai Jiao Tong University*  
*Shanghai China*

*for contributions to the design and implementation of distributed operating systems*

*Yonghong Chen*  
*Midcontinent Independent System Operator (MISO)*  
*Zionsville IN USA*

*for contributions in wholesale electricity market design and operations*

*Hong Chen*  
*Tongji University*  
*Shanghai China*

*for contributions to predictive control and applications in automotive systems*

*Hao Chen*  
*University of California Davis*  
*Davis CA USA*

*for contributions to the security of software and mobile systems*

2023 NEWLY ELEVATED FELLOWS

*Guihai Chen  
Nanjing University  
Nanjing Jiangsu China*

*for contributions to large-scale distributed network architecture*

*Yixin Chen  
Washington University  
Saint Louis MO USA*

*for contributions to advancing the compactness and applicability of deep learning systems*

*Julian Z Cheng  
The University of British Columbia  
Kelowna BC Canada*

*for contributions to mathematical modeling of wireless systems and energy-efficient resource management of wireless networks*

*Shing C Cheung  
Hong Kong China*

*for contributions to testing methodologies and bug management for software*

*Yuejie Chi  
Carnegie Mellon University  
Pittsburgh PA USA*

*for contributions to statistical signal processing with low-dimensional structures*

*Kyung Cheol Choi  
Korea Advanced Institute of Science & Technology  
Daejeon Korea*

*for contributions to emissive, flexible, and wearable displays*

2023 NEWLY ELEVATED FELLOWS

*Jinho Choi  
Deakin University  
Burwood Victoria Australia*

*for contributions to multiple access signal processing systems*

*Frederic Chong  
University of Chicago  
Chicago IL USA*

*for contributions to the field of quantum computer architecture, compilation and optimization*

*Jong-Moon Chung  
Yonsei University  
Seoul Korea*

*for contributions in consumer wireless communications and networking systems technology*

*Song Ci  
Tsinghua University  
Beijing China*

*for contributions to reconfigurable electric vehicle batteries*

*Gari D. Clifford  
Emory Healthcare  
Atlanta GA USA*

*for contributions to machine-learning applications in cardiovascular time series*

*Margaret E Daube-Witherspoon  
Fairfax Station VA USA*

*for Contributions to 3D Image Reconstruction in PET and Corrections for Physics Effects*

2023 NEWLY ELEVATED FELLOWS

*Ali Davoudi  
University of Texas at Arlington  
Arlington TX USA*

*for contributions to power-electronic dominant microgrid control*

*Chris L De Korte  
Radboud University Medical Center  
Zeist Netherlands*

*for the development of translation of intravascular elastography for ultrasound imaging*

*Andre M Dehon  
University of Pennsylvania  
Philadelphia PA USA*

*for contributions to reconfigurable computing and FPGAs*

*Paul Denholm  
National Renewable Energy Laboratory  
Golden CO USA*

*for contributions to energy storage in renewable-energy systems*

*Natasha Devroye  
University of Illinois Chicago  
Chicago IL USA*

*for fundamental contributions to the theoretical understanding of cognitive, two-way, and relay networks*

*Harpreet Dhillon  
Virginia Tech  
Blacksburg VA USA*

2023 NEWLY ELEVATED FELLOWS

*for contributions to heterogeneous cellular networks*

*Roberto Di Pietro  
Hamad Bin Khalifa University  
Doha Ar Rayyan Qatar*

*for contributions to the security of distributed systems*

*Dimos Dimarogonas  
KTH Royal Institute of Technology  
Stockholm Sweden*

*for contributions to distributed and hybrid control of multi-agent systems*

*Wei Ding  
University of Massachusetts Boston  
Lexington MA USA*

*for contributions to data mining and Big Data research in scientific domains*

*Aaron M Dollar  
Yale University  
New Haven CT USA*

*for contributions to dexterous grasping and manipulation*

*Alejandro D Dominguez-Garcia  
University of Illinois Urbana Champaign  
Urbana IL USA*

*for contributions to distributed control and uncertainty analysis of electrical energy systems*

*Daoyi Dong  
Australian Defence Force Academy  
Canberra Australian Capital Territory Australia*

2023 NEWLY ELEVATED FELLOWS

*for contributions to quantum systems control and reinforcement learning*

*Marvin M Doyley  
University of Rochester  
Rochester NY USA*

*for research of ultrasound elastography using inverse methods*

*Wenliang Du  
Syracuse University  
Syracuse NY USA*

*for contributions to cybersecurity education and research*

*Michael T Eismann  
Air Force Research Laboratory  
Beavercreek OH USA*

*for extraordinary technical leadership of hyperspectral remote sensing and infrared technology research for defense applications*

*Ayman S El-baz  
University of Louisville  
Louisville KY USA*

*for contributions to artificial intelligence in medicine*

*Tetsuo Endoh  
Tohoku University  
Sendai Miyagi Japan*

*for contributions to nonvolatile memory and spintronic logic*

*Mauro Ettore  
The French National Centre for Scientific Research  
Rennes Cedex Bretagne France*

## 2023 NEWLY ELEVATED FELLOWS

*for contributions to large antenna arrays based on quasi-optical beam formers*

*John W Evans  
Silver Spring MD USA*

*for contributions to electronics parts and assemblies for space systems*

*Dario Floreano  
Swiss Federal Institute of Technology  
Lausanne Switzerland*

*for contributions to bio-inspired drone development and evolutionary robotics*

*Fabrizio Forghieri  
Cisco Photonics  
Monza and Brianza Italy*

*for contributions to optical communications systems*

*Antonio Franchi  
University of Twente  
Enschede Netherlands*

*for contributions to modelling, design, and control for aerial and distributed robotic systems*

*Kingsley C Fregene  
Lockheed Martin  
Grand Prairie TX USA*

*for contributions to the autonomous control of unmanned vehicles*

*Robert D. Frisina  
University of South Florida  
Tampa FL USA*

*for distinguished contributions in neuroengineering and auditory sciences, especially age-related hearing loss causes and treatments*

2023 NEWLY ELEVATED FELLOWS

*Fei Gao*  
*University of Technology of Belfort-Montbéliard*  
*Belfort Franche-Comte France*

*for contributions to real-time simulation and control techniques for fuel cells and power converters*

*Zhiwei Gao*  
*Northumbria University*  
*Newcastle upon Tyne United Kingdom*

*for contributions to real-time diagnosis and control of wind turbine systems*

*James Garrison*  
*Purdue University*  
*West Lafayette IN USA*

*for contributions to Earth remote sensing using signals of opportunity*

*Peter Gerstoft*  
*University of California San Diego*  
*San Diego CA USA*

*for contributions to environmental signal processing and geo-acoustic array processing*

*Juan E Gilbert*  
*University of Florida*  
*Gainesville FL USA*

*for leadership in broadening participation in computing and contributions to accessible voting technologies*

2023 NEWLY ELEVATED FELLOWS

*Roberto Gomez-Garcia  
University of Alcala  
Getafe Madrid Spain*

*for contributions to planar multi-function microwave filters*

*Hoay B Gooi  
Nanyang Technological University  
Singapore*

*for contributions to energy storage in microgrids*

*Harald JE Gossner  
Intel Corporation Germany  
Neubiberg Germany*

*for contributions to ESD design of advanced IC devices and high-speed systems*

*Julie Grollier  
The French National Centre for Scientific Research  
Palaiseau France*

*for contributions to the use of spintronic devices for neuromorphic computing*

*Yike Guo  
Imperial College London  
London United Kingdom*

*for contributions to data mining and its applications*

*Lei Guo  
Beihang University  
Beijing China*

*for contributions to composite anti-disturbance control systems*

2023 NEWLY ELEVATED FELLOWS

*Amar Gupta  
Massachusetts Institute of Technology  
West Newton MA USA*

*for contributions to banking transactions and healthcare practice*

*Karen Zita Haigh  
BBN Technologies  
Loretto MN USA*

*for contributions to closed-loop control of embedded systems*

*Donhee Ham  
Harvard University  
Cambridge MA USA*

*for contributions to semiconductor electronic interfaces with biological systems*

*Guangjie Han  
Hohai University  
Changzhou Jiangsu China*

*for contributions to Internet of Underwater Things and Industrial Internet of Things*

*Zenichiro Hara  
Mitsubishi Electric Corporation  
Nishisonogi-gun Nagasaki Japan*

*for contribution to Large-Scale Color Display systems and practical realization*

*Kensuke Harada  
Osaka University  
Toyonaka Japan*

*for contributions to whole-body manipulation for biped humanoid robots*

2023 NEWLY ELEVATED FELLOWS

*David G Hart  
Raleigh NC USA*

*for contribution to the development of the smart grid*

*Chen He  
NXP Semiconductors  
Austin TX USA*

*for contributions to test of automotive microcontrollers and microprocessors*

*Richard Heller  
University of South Florida  
Tampa FL USA*

*for contributions to medical engineering for therapeutic applications*

*Masataka Higashiwaki  
National Institute of Information & Communications Technology  
Koganei Tokyo Japan*

*for contributions to gallium oxide electronics and millimeter-wave gallium nitride transistors*

*Marko P Hinkkanen  
Aalto University  
Aalto Finland*

*for contributions to sensorless control of industrial motor drives*

*Derek W Hoiem  
University of Illinois Urbana-Champaign  
Urbana IL USA*

*for contributions to computer vision*

2023 NEWLY ELEVATED FELLOWS

*Wonbin Hong*  
*Pohang University of Science and Technology*  
*Pohang Gyeongsangbuk-do Korea*

*for contributions to millimeter-wave mobile and base station antennas*

*Ahmad Hoorfar*  
*Villanova University*  
*Villanova PA USA*

*for contributions to sensing and imaging in stratified media and optimization in electromagnetics*

*Atsushi Hori*  
*Tokyo Institute of Technology*  
*Yokohama Kanagawa Japan*

*for contributions to the development and manufacture of low-power CMOS for digital consumer appliances*

*Bin Hu*  
*Lanzhou University*  
*Lanzhou Gansu China*

*for contributions to pervasive affective computing*

*He Huang*  
*North Carolina State University*  
*Raleigh NC USA*

*for contributions in control development in rehabilitation robotics*

*Muhammad A Imran*  
*University of Glasgow*  
*Glasgow United Kingdom*

*for contributions to energy efficient and self-organized wireless systems*

2023 NEWLY ELEVATED FELLOWS

*Ali Javey*  
*University of California Berkeley*  
*Berkeley CA USA*

*for contributions to 1D and 2D semiconductor transistors and wearable biochemical sensors*

*Uma S Jha*  
*L3Harris Technologies*  
*Indian Harbour Beach FL USA*

*for advancements in multi-standard and multi-function wireless communication system design*

*Shuiwang Ji*  
*Texas A & M University*  
*College Station TX USA*

*for contributions to machine learning and data mining*

*Hai Jiang*  
*University of Alberta*  
*Edmonton AB Canada*

*for contributions to cognitive radio networking and wireless performance analysis*

*Xiaoning Jiang*  
*North Carolina State University*  
*Raleigh NC USA*

*for contributions to ultrasound transducers for advanced sensing, imaging, and therapy*

2023 NEWLY ELEVATED FELLOWS

*Zhi Jin  
Peking University  
Beijing China*

*for significant contributions to knowledge-driven software development*

*James B Joshi  
706A SIS Building  
Pittsburgh PA USA*

*for contributions to access control and privacy*

*David B Kaber  
University of Florida  
Gainesville FL USA*

*for modeling and analysis of human-automation interaction and human-machine interface design in complex systems*

*Yong Kang  
Huazhong University of Science and Technology  
Wuhan Hubei China*

*for contributions to digital control of inverters and renewable power conversion systems*

*Magnus Karlsson  
Chalmers University of Technology  
Gothenburg Vastra Gotaland Sweden*

*for fundamental contributions to the study of nonlinear fiber propagation and advanced modulation formats*

*Ryan Kastner  
San Diego CA USA*

*for contributions to the design and security of reconfigurable systems*

2023 NEWLY ELEVATED FELLOWS

*Shin-Ichi Kawamura  
National Institute of Advanced Industrial Science & Technology  
Kodaira Tokyo Japan*

*for contributions to cost-effective and secure cryptography*

*Carl Kesselman  
University of Southern California  
Santa Monica CA USA*

*for foundational contributions to technologies and applications of global distributed computing*

*Muhammad M Khellah  
Intel Corporation  
Tigard OR USA*

*for contributions to design technology co-optimization (DTCO) of on-die dense memory and fine-grain power-management circuits*

*Chang-Su Kim  
Korea University  
Seoul Korea*

*for contributions to video communications and visual processing*

*Andras Kis  
Swiss Federal Institute of Technology  
Lausanne Switzerland*

*for contributions to the development of 2D materials and electronic devices*

2023 NEWLY ELEVATED FELLOWS

*Mathias Klaui  
University of Mainz  
Mainz Germany*

*for his contribution to the next generation magnetic solid-state memory, logic and sensor devices*

*Alois C Knoll  
Institut Fuer Informatik VI  
Garching Germany*

*for contributions to Human-Robot Interaction and Neurorobotics*

*Tadayoshi Kohno  
University of Washington  
Seattle WA USA*

*for contributions to cybersecurity*

*Keisuke Kojima  
Boston Quantum Photonics, LLC  
Weston MA USA*

*for application of AI technologies to optimize the design of active and passive photonic devices*

*Jana Kosecka  
George Mason University  
Annandale VA USA*

*for contributions to robust embodied vision systems and semantic modeling in robotics*

2023 NEWLY ELEVATED FELLOWS

*Marios Kountouris  
Eurecom  
Sophia-Antipolis France*

*for contributions to optimization and multi-antenna techniques in heterogeneous wireless networks*

*Bhaskar Krishnamachari  
University of Southern California  
Los Angeles CA USA*

*for contributions to algorithms and protocols for wireless networks*

*Torsten Kroeger  
Intrinsic  
Menlo Park CA USA*

*for contributions to real-time motion planning*

*Richard C Lanza  
Massachusetts Institute of Technology  
Brookline MA USA*

*for developing novel imagers and radiation detectors applied to medicine and security problems*

*Cecilia Laschi  
National University of Singapore  
Singapore*

*for contributions to soft robotics*

*Javad Lavaei  
University of California Berkeley  
El Cerrito CA USA*

*for contributions to nonlinear optimization in power systems*

2023 NEWLY ELEVATED FELLOWS

*Bernard C Lesieutre  
University of Wisconsin-Madison  
Madison WI USA*

*for contributions to electric power system dynamic modeling, simulation and power engineering education*

*Laura H Lewis  
Northeastern University  
Boston MA USA*

*for contributions to the design of magneto-functional materials*

*Zong-Ming Li  
University of Arizona  
Tucson AZ USA*

*for contributions to carpal tunnel biomechanics and neuromuscular hand motor control*

*Minglu Li  
Jiao Tong University  
Shanghai China*

*for contributions to wireless sensor and vehicular networks*

*Jonathan Li  
University of Waterloo  
Waterloo ON Canada*

*for contribution to point cloud analytics in LiDAR remote sensing*

2023 NEWLY ELEVATED FELLOWS

*Zhengguo Li  
Institute for Infocomm Research  
Singapore*

*for contributions to video encoding and streaming optimization and edge-preserving filters*

*Chen Li  
University of California Irvine  
Irvine CA USA*

*for contributions to supporting similarity queries in databases and data-intensive computing*

*Guann-Pyng Li  
University of California Irvine  
Irvine CA USA*

*for contributions to the bipolar device, circuit and technology in silicon and compound semiconductors*

*Guoliang Li  
Tsinghua University  
Beijing China*

*for contributions to human-in-the-loop data management and database systems*

*Jia Li  
Stanford University  
Palo Alto CA USA*

*for leadership in large-scale AI*

2023 NEWLY ELEVATED FELLOWS

*Sung Kyu Lim  
Georgia Institute of Technology  
Atlanta GA USA*

*for contributions to electronic design automation and tradeoff for 3-dimensional integrated circuits*

*Christina M Lim  
The University of Melbourne  
Melbourne Victoria Australia*

*for contributions in hybrid fiber-wireless communications technology*

*Haibin Ling  
Stony Brook University  
Stony Brook NY USA*

*for contributions to computer vision for visual tracking and matching*

*Zhigang Liu  
Southwest Jiaotong University  
Chengdu Sichuan China*

*for contributions to fault detection and protection in high-speed railway power systems*

*Wei Liu  
Tencent  
Shenzhen Guangdong China*

*for contributions to large-scale machine-learning and multimedia intelligence*

*Ce Liu  
Microsoft Corporation  
Belmont MA USA*

*for contributions to computer vision and computational photography*

2023 NEWLY ELEVATED FELLOWS

*Xiaoming Liu  
Michigan State University  
Okemos MI USA*

*for contributions to facial image analysis and recognition*

*Andrew Lord  
BT Group  
Colchester Essex United Kingdom*

*for contributions to optical networking*

*Ashraf W Lotfi  
Englishtown NJ USA*

*for pioneer contributions in developing and commercializing high-density 3-dimensional integrated power electronics modules*

*Karon Maclean  
University of British Columbia  
Vancouver BC Canada*

*for contributions to the design of haptic communication*

*Mohammad Maddah-ali  
Stanford University  
Cupertino CA USA*

*for contributions to information theory for interference management, coded caching and computing*

*Pierluigi Mancarella  
The University of Melbourne  
Melbourne Australia*

*for contribution to power system resilience and multi-energy systems*

2023 NEWLY ELEVATED FELLOWS

*Rajit Manohar  
Yale University  
New Haven CT USA*

*for contributions to the design and implementation of asynchronous circuits and systems*

*Chengxiong Mao  
Huazhong University of Science and Technology  
Wuhan Hubei China*

*for leadership in active control of power systems and its industrial applications*

*Anthony F Martone  
Army Research Laboratory  
Adelphi MD USA*

*for contributions to the development and validation of cognitive radar systems*

*Takashi Matsuoka  
Tohoku University  
Sendai Miyagi Japan*

*for contributions to laser diodes for optical communications and nitride semiconductors for light-emitting devices*

*Michail Matthaiou  
Queen's University Belfast  
Belfast United Kingdom*

*for contributions to fundamental research and practical implementation of massive MIMO*

2023 NEWLY ELEVATED FELLOWS

*Gerald Matz  
TU Wien  
Wien Austria*

*for contributions to signal processing for communications in nonstationary environments*

*Arianna Menciassi  
Scuola Superiore Sant'Anna  
Pontedera Italy*

*for contributions to the development of robots for minimally invasive surgery*

*Florian E Metze  
Carnegie Mellon University  
Larchmont NY USA*

*for contributions to end-to-end training of speech recognition systems*

*Chunyan Miao  
Nanyang Technological University  
Singapore*

*for contributions to multimodal signal processing and AI technologies for aging-at-home and population health*

*James B Michael  
Naval Postgraduate School  
Pebble Beach CA USA*

*for contributions to the protection of critical infrastructure*

*Thomas Mikolajick  
NaMLab  
Dresden Sachsen Germany*

*for contributions to nonvolatile memory*

2023 NEWLY ELEVATED FELLOWS

*Linda S Milor  
Georgia Institute of Technology  
Atlanta GA USA*

*for contributions to testing of analog circuits and bridging the design-manufacturing gap for integrated circuits*

*Richard P Mirin  
National Institute of Standards and Technology  
Boulder CO USA*

*for contributions to quantum photonic devices*

*Mohammad Modarres  
University of Maryland  
College Park MD USA*

*for contributions to probabilistic risk assessment in nuclear safety*

*Marta Molinas  
Norwegian University of Science and Technology  
Trondheim Norway*

*for contributions to modeling and stability of power electronics*

*Gabriele Moser  
University of Genoa  
Genoa Italy*

*for contributions to pattern recognition in remote sensing*

*Ralf Reiner Mueller  
Universitaet Erlangen-Nuernberg  
Erlangen Germany*

*for contributions to the design and analysis of large multi-antenna and multiple-access systems*

2023 NEWLY ELEVATED FELLOWS

*Gabriel Miro Muntean  
Dublin City University  
Dublin City Ireland*

*for contributions in multimedia quality in heterogeneous network environments*

*Tamara Munzner  
University of British Columbia  
Vancouver BC Canada*

*for contributions to principles, processes, and design for visualization*

*Chandra R Murthy  
Indian Institute of Science  
Bangalore India*

*for contributions to Bayesian sparse signal recovery and energy harvesting communications*

*Kashem M Muttaqi  
University of Wollongong  
Wollongong New South Wales Australia*

*for contribution to modeling and control of renewable and distributed energy resources*

*Kazuhiro Nakadai  
Tokyo Institute of Technology  
Meguro-ku Tokyo Japan*

*for contributions to robot audition and computational auditory scene analysis*

2023 NEWLY ELEVATED FELLOWS

*Yoshiaki Nakano  
The University of Tokyo  
Bunkyo-ku Tokyo Japan*

*for contributions to semiconductor integrated photonic devices and circuits*

*Premkumar Natarajan  
University of Southern California  
Rolling Hills Estates CA USA*

*for contributions to conversational AI systems, spoken language translation, and home voice-assistant systems*

*Suman Nath  
Microsoft Research  
Redmond WA USA*

*for contributions to the dynamic analysis framework for mobile and cloud systems*

*Michael Negnevitsky  
University of Tasmania  
Hobart Tasmania Australia*

*for contributions to application of AI techniques for control of isolated hybrid power systems*

*Tze Sing Eugene Ng  
Rice University  
Houston TX USA*

*for contributions to circuit-switched innovations in data center network and scalable methods for Internet delay estimation*

*Douglas C Noll  
University of Michigan  
Ann Arbor MI USA*

*for contributions to functional magnetic resonance imaging of the brain*

2023 NEWLY ELEVATED FELLOWS

*Hideki Ochiai*  
*Yokohama National University*  
*Yokohama Kanagawa Japan*

*for contributions to power and spectral efficient wireless communication*

*Kenichi Okada*  
*Tokyo Institute of Technology*  
*Tokyo Japan*

*for contributions to millimeter-wave communication circuits design*

*Masaaki Okubo*  
*Osaka Metropolitan University*  
*Sakai Osaka Japan*

*for contributions to non-thermal plasma applications for pollution control*

*Boon S Ooi*  
*King Abdullah University of Science and Technology*  
*Thurwal Makkah Saudi Arabia*

*for contributions to broadband light emitters and visible light communications*

*Omer Oralkan*  
*North Carolina State University*  
*Raleigh NC USA*

*for contributions to micromachined ultrasonic transducers and integrated microsystems development, for imaging, therapy, and sensing*

2023 NEWLY ELEVATED FELLOWS

*Christian Ott  
German Aerospace Center  
Wessling Bayern Germany*

*for contributions to torque-control theory using passive joint elasticity and the whole-body control of humanoids*

*Ye Ouyang  
AsiaInfo Technologies  
Warren NJ USA*

*for leadership in network intelligence and self-organizing cellular networks*

*Jianping Pan  
University of Victoria  
Victoria BC Canada*

*for contributions to topology control of wireless networks*

*Shilong Pan  
Nanjing University  
Nanjing Jiangsu China*

*for contributions to high-performance microwave-photonic imaging radar*

*Srinivasan Parthasarathy  
Ohio State University  
Dublin OH USA*

*for contributions to high performance data mining and network analysis*

*John M Pauly  
Stanford University  
Stanford CA USA*

*for contributions to data acquisition and image reconstruction methods for magnetic resonance imaging*

2023 NEWLY ELEVATED FELLOWS

*Anna Peacock  
University of Southampton  
Southampton Hampshire United Kingdom*

*for contributions to nonlinear fiber optics and materials*

*Hanspeter Pfister  
Harvard University  
Cambridge MA USA*

*for contributions to computer vision applications*

*Khanh Dai Pham  
Air Force Research Laboratory  
Albuquerque NM USA*

*for leadership in military aerospace decision support systems and strategic small business innovation*

*Vir V Phoha  
Syracuse University  
Syracuse NY USA*

*for development of attack-averse active authentication using behavioral patterns*

*Britton L. T. Plourde  
Syracuse University  
Syracuse NY USA*

*for contributions to integration of qubits into future practical quantum computing systems*

*Michael O Polley  
Garland TX USA*

*for leadership in multimedia chipset architectures and mobile camera technologies*

2023 NEWLY ELEVATED FELLOWS

*Gabriel Popescu  
University of Illinois Urbana-Champaign  
Urbana IL USA*

*for contributions to phase imaging in biomedical applications*

*Radislav A. Potyrailo  
GE Global Research  
Niskayuna NY USA*

*for contributions to sensor technologies for gas differentiation, interference rejection, and drift elimination*

*Daniel Povey  
Xiaomi Inc.  
Beijing China*

*for contributions to acoustic modeling for speech recognition*

*James C Preisig  
JPAnalytics, LLC  
East Falmouth MA USA*

*for contributions to underwater acoustic communication channel modeling, signal processing and performance prediction*

*Yihong Qi  
General Test Systems  
Waterloo ON Canada*

*for contributions to over-the-air testing of massive MIMO systems and development of over-the-air measurement systems*

2023 NEWLY ELEVATED FELLOWS

*Oscar Quevedo-Teruel  
KTH Royal Institute of Technology  
Stockholm Sweden*

*for contributions to glide symmetry-based metasurfaces and lens antennas*

*Moinuddin K Qureshi  
Georgia Institute of Technology  
Atlanta GA USA*

*for contributions to scalable memory systems*

*Munaf T Rahimo  
MTAL GmbH  
Gansbrunnen Solothurn Switzerland*

*for contributions to high-voltage insulated gate bipolar transistors for grid applications*

*Rajesh Rao  
University of Washington  
Seattle WA USA*

*for contributions to brain-computer interfaces and computational modeling*

*Sherief M Reda  
Brown University  
Providence RI USA*

*for contributions to energy-efficient and approximate computing*

*Christian Rehtanz  
Technische Universitat Dortmund  
Dortmund Germany*

*for contributions to wide area monitoring, protection and control systems for electrical power grids*

2023 NEWLY ELEVATED FELLOWS

*Woogeun Rhee  
Tsinghua University  
Beijing China*

*for contributions to phase-locked circuits and systems*

*Paolo Rocca  
ELEDIA Research Center  
Trento Italy*

*for contributions to clustered and time-modulated antenna arrays*

*Miguel Raul D Rodrigues  
University College London  
London United Kingdom*

*for contributions to multimodal data processing and foundations of reliable and secure communications*

*Juan J Rodriguez-Andina  
University of Vigo  
Vigo Spain*

*for contributions to embedded systems in industrial electronics*

*Toshiaki Rokunohe  
Hitachi Ltd.  
Hitachi-shi Ibaraki Japan*

*for contributions to eco-friendly compact and reliable high-voltage equipment*

*Sei-Hyung Ryu  
Wolfspeed, a Cree Company  
Cary NC USA*

*for contributions to silicon carbide power device technology*

2023 NEWLY ELEVATED FELLOWS

*Henrik Sandberg  
KTH Royal Institute of Technology  
Stockholm Sweden*

*for contributions to model reduction and secure control systems*

*Eunice E Santos  
University of Illinois Urbana-Champaign  
Champaign IL USA*

*for leadership in computational social networks*

*Jose A Santos-Victor  
Instituto Superior Tecnico  
Lisboa Portugal*

*for contributions to biologically-inspired cognitive vision and humanoid robotic systems*

*Jean-Luc Schanen  
University Grenoble Alps  
Grenoble France*

*for contribution to Electromagnetic Compatibility in Power Electronics*

*Laurent Schmalen  
Karlsruher Institut für Technologie  
Karlsruhe Baden-Wuerttemberg Germany*

*for contributions to the design of error correction and modulation techniques for optical networks*

*Stephanie Schuckers  
Clarkson University  
Potsdam NY USA*

*for contributions in biometric recognition systems*

2023 NEWLY ELEVATED FELLOWS

*Jack J Schuss  
Raytheon Company  
Newton Centre MA USA*

*for leadership in the development of antennas for satellite communications and radars*

*Abu Sebastian  
Cloud and AI Systems Research  
Rueschlikon Zurich Switzerland*

*for contributions to in-memory computing for scientific applications*

*Gonzalo Seco-granados  
Universitat Autònoma de Barcelona  
Bellaterra Catalunya Spain*

*for contributions to signal processing for global navigation satellite systems, and 5G localization systems*

*Howard G Sedding  
Iris Power  
Elgin ON Canada*

*for contributions to practical partial discharge testing of electrical equipment*

*Tomonobu Senjyu  
University of the Ryukyus  
Nakagami Okinawa Japan*

*for contributions to wind-power generator automation and control*

2023 NEWLY ELEVATED FELLOWS

*Wanxing Sheng*  
*China Electric Power Research Institute*  
*Beijing China*

*for contributions to safe operation and coordinated control of smart power distribution systems*

*Krishna V Shenoy*  
*Stanford University*  
*Stanford CA USA*

*for contributions to cortical control of movement and brain-computer interfaces*

*Ling Shi*  
*Hong Kong University of Science and Technology*  
*Kowloon Hong Kong*

*for contributions to cyber-physical system optimization and security*

*Ping Shum*  
*Southern Univ of Science and Technology*  
*Shenzhen Guangdong China*

*for pioneering contributions in optical fiber-based technologies and their diverse applications*

*Uri Shumlak*  
*University of Washington*  
*Seattle WA USA*

*for research of sheared flow stabilization of the Z pinch for fusion energy*

*Anthony Man-Cho So*  
*The Chinese University of Hong Kong*  
*Shatin Hong Kong*

*for contributions to optimization in signal processing and communications*

2023 NEWLY ELEVATED FELLOWS

*Houbing Song  
Embry-Riddle Aeronautical University  
Daytona Beach FL USA*

*for contributions to big data analytics and integration of AI with Internet of Things*

*Vesna Sossi  
University of British Columbia  
Vancouver BC Canada*

*for contributions to quantitative and translational brain PET imaging*

*Pavlos P Sotiriadis  
Institute of Communication & Computer Systems  
Athens Greece*

*for contributions to advanced frequency synthesis and high-speed data buses*

*Yilmaz Sozer  
University of Akron  
Akron OH USA*

*for contributions to the design and control of electric machine drives*

*Ankur Srivastava  
University of Maryland  
College Park MD USA*

*for contributions to chip hardware security*

*Konstantin Staschus  
Guidehouse  
Berlin Germany*

*for the institutionalization of Europe-wide joint transmission grid planning*

2023 NEWLY ELEVATED FELLOWS

*Thomas Stockhammer  
Qualcomm CDMA Technologies  
Bergen Bayern Germany*

*for contributions to media delivery and video streaming standards*

*Dmitri Strukov  
University of California Santa Barbara  
Santa Barbara CA USA*

*for contributions to neuromorphic and alternative computing systems based on emerging memory devices*

*Zhendong Su  
ETH Zurich  
Zurich Switzerland*

*for contributions to automated software testing and analysis*

*Changho Suh  
Korea Advanced Institute of Science & Technology  
Daejeon Korea*

*for contributions to interference management and distributed storage codes*

*Richard R Syms  
Imperial College London  
London United Kingdom*

*for contributions to mass spectrometers based on microelectromechanical system technology*

*Ying Tan  
University of Melbourne  
Parkville Victoria Australia*

*for contributions to rehabilitation robotics*

2023 NEWLY ELEVATED FELLOWS

*Lixin Tang  
Northeastern University  
Shenyang Liaoning China*

*for contributions to computational intelligence and applications in manufacturing*

*Ke Tang  
SUSTech  
Shenzhen Guangdong China*

*for contributions to scalable evolutionary algorithms for large-scale optimization*

*Andrew A Tay  
Singapore University of Technology and Design  
Singapore Central Singapore*

*for contributions to hygro-thermo-mechanical failure prevention of semiconductor packaging*

*Abdelhamid Tayebi  
Lakehead University  
Thunder Bay ON Canada*

*for contributions to the control of unmanned aerial vehicles and learning-based control for robot manipulators*

*Smail Tedjini  
University Grenoble Alps  
Valence France*

*for contributions to the development of harmonic backscattering RFID systems and chipless tag solutions*

2023 NEWLY ELEVATED FELLOWS

*Stefan Tenbohlen  
University of Stuttgart  
Stuttgart Germany*

*for contributions to leadership in power transformer reliability*

*Olav Tirkkonen  
Aalto University  
Aalto Finland*

*for contributions in the theory and practice of wireless communications technology and standards*

*Robert L Tjoelker  
NASA  
Everson WA USA*

*for contributions advancing trapped ion microwave clocks and deep-space frequency and timing systems*

*Kin F Tong  
University College London  
London United Kingdom*

*for contributions to wideband and circularly polarized printed antenna designs*

*Massimo Tornatore  
Politecnico di Milano  
Milano Italy*

*for contributions to machine-learning and optimization algorithms for resource management in optical networks*

*Giovanni A Toso  
European Space Agency  
Noordwijk Zuid-Holland Netherlands*

*for contributions to multibeam antenna developments for satellite applications*

2023 NEWLY ELEVATED FELLOWS

*Miguel Urteaga  
Teledyne Scientific & Imaging  
Thousand Oaks CA USA*

*for contributions to terahertz heterojunction bipolar transistor integrated circuit technology*

*Subramanian V Vadari  
Modern Grid Solutions  
Redmond WA USA*

*for leadership in electric power system planning and markets*

*Piet Van Mieghem  
Delft University of Technology  
Delft Netherlands*

*for contributions to network modeling and quality of service-based routing*

*Sriram R Vangal  
Intel Corporation  
Portland OR USA*

*for contributions to network-on-chip architectures*

*Marian Verhelst  
KULeuven  
Heverlee Vlaams-Brabant Belgium*

*for contributions to energy-efficient near-sensor processing and embedded Machine Learning Processors*

## 2023 NEWLY ELEVATED FELLOWS

*Pierre J Verlinden  
Amrock Pty Ltd  
Mclaren Vale South Australia Australia*

*for leadership in high-performance silicon solar cell and photovoltaics technology and commercialization*

*Dmitri Vinnikov  
Tallinn University of Technology  
Tallinn Estonia*

*for contributions to impedance-source converter design*

*Birgit Vogel-heuser  
Technische Universitaet Muenchen  
Garching bei Muenchen Bayern Germany*

*for contributions to evolvable, adaptable field-level automation architectures for manufacturing systems and logistics*

*Jianping Wang  
City University of Hong Kong  
Kowloon Hong Kong*

*for contributions to resiliency of complex systems*

*Xiongfei Wang  
Aalborg University  
Aalborg Nordjylland Denmark*

*for contributions to power-electronic-based power systems*

*Qian Wang  
Wuhan University  
Wuhan Hubei China*

*for contributions to secure cloud data storage and wireless system security*

2023 NEWLY ELEVATED FELLOWS

*Hua Wang*  
*Georgia Institute of Technology*  
*Atlanta GA USA*

*for contributions to high-efficiency microwave and millimeter-wave power amplifiers*

*Hong Wang*  
*Oak Ridge National Laboratory*  
*Farragut TN USA*

*for contributions to learning control and diagnosis for complex dynamical systems*

*Xin Wang*  
*Fudan University*  
*Shanghai China*

*for outstanding contributions to wireless localization and dynamic resource allocation in broadband mobile networks*

*Xiaoyu Wang*  
*Sammamish WA USA*

*for contributions to video analysis technologies for embedded systems*

*Yinhai Wang*  
*University of Washington*  
*Seattle WA USA*

*for contributions to traffic sensing, transportation data science, and smart infrastructure systems*

*Jue Wang*  
*Woodinville WA USA*

*for contributions to quality of image and video matting processing*

2023 NEWLY ELEVATED FELLOWS

*Wei Wang*  
*University of California Los Angeles*  
*Los Angeles CA USA*

*for contributions to data mining*

*Zbigniew Roman Wasilewski*  
*University of Waterloo*  
*Waterloo ON Canada*

*for contributions to molecular beam epitaxy growth technology and photonic devices*

*Shinji Watanabe*  
*Carnegie Mellon University*  
*Pittsburgh PA USA*

*for contributions to speech recognition technology*

*Keith A Wear*  
*Food and Drug Administration*  
*Silver Spring MD USA*

*for applying acoustic pressure measurements to improve the safety and effectiveness of medical ultrasound*

*Stefan A Werner*  
*Norwegian University of Science and Technology*  
*Trondheim Norway*

*for contributions to in-band full-duplex wireless communication systems and selective data-reuse online learning*

2023 NEWLY ELEVATED FELLOWS

*Mark M Wilde  
Cornell University  
Ithaca NY USA*

*for contributions to the relative-entropy framework and theorems for quantum communications*

*Jason D Williams  
Apple Inc.  
Seattle WA USA*

*for contributions to the theory and practice of machine-learning-based spoken dialog systems*

*Brendt Wohlberg  
Los Alamos National Laboratory  
Los Alamos NM USA*

*for contributions to computational imaging and sparse representations*

*Tilman Wolf  
University of Massachusetts Amherst  
Amherst MA USA*

*for contributions to design of network processors and in-network processing services*

*Daniel Worledge  
IBM Research  
San Jose CA USA*

*for contributions to magneto-resistive random access memories*

2023 NEWLY ELEVATED FELLOWS

*Yongwei Wu  
Tsinghua University  
Beijing China*

*for contributions to high-performance data storage and data-intensive computing systems*

*Kaishun Wu  
Shenzhen University  
Shenzhen Guangdong China*

*for contributions to wireless sensing and ubiquitous computing*

*Dongrui Wu  
Huazhong University of Science and Technology  
Wuhan Hubei China*

*for contributions to fuzzy logic and its applications to controls and decision-making*

*Qiangfei Xia  
University of Massachusetts Amherst  
Winchester MA USA*

*for contributions to resistive memory arrays and devices for in-memory computing*

*Xiaokui Xiao  
National University of Singapore  
Singapore*

*for contributions to database privacy and graph data management*

*Lijun Xu  
Beihang University  
Beijing China*

*for contributions to multiphase flow measurement and combustion process monitoring*

2023 NEWLY ELEVATED FELLOWS

*Mingzhou Xu  
Honeywell International Inc.  
Tucson AZ USA*

*for contributions to power systems of all-electric aircraft*

*Jingling Xue  
University of New South Wales  
Sydney New South Wales Australia*

*for contributions to compiler optimization and program analysis*

*Jun Yang  
Loughborough University  
Leicestershire United Kingdom*

*for contributions to disturbance observer-based control*

*Ping Yang  
Texas A & M University  
College Station TX USA*

*for seminal contributions to radiative transfer and remote sensing of ice clouds and dust aerosols*

*Kun Yang  
University of Essex  
Colchester Essex United Kingdom*

*for contributions to resource management in wireless networks*

*Danfeng Yao  
Virginia Tech  
Blacksburg VA USA*

*for contributions to enterprise data security and high-precision vulnerability screening*

2023 NEWLY ELEVATED FELLOWS

*Shen Yin  
Norwegian University of Science and Technology  
Trondheim Trondelag Norway*

*for contributions to fault diagnosis and fault-tolerant control of complex systems*

*Fung Yu Young  
Chinese University of Hong Kong  
New Territories Hong Kong*

*for contributions to electronic design automation in VLSI physical design*

*Shucheng Yu  
Stevens Institute of Technology  
Hoboken NJ USA*

*for contributions to information and network security*

*Quan Yu  
Peng Cheng Laboratory  
Nanjing Jiangsu China*

*for technical leadership in radio and space-air-ground integrated network technologies*

*Shui Yu  
University of Technology Sydney  
Sydney New South Wales Australia*

*for contributions to cyber security and privacy*

2023 NEWLY ELEVATED FELLOWS

*Sufi Zafar*  
*IBM TJ Watson Research Center*  
*Yorktown Heights NY USA*

*for contributions to CMOS-compatible biosensors and high permittivity field effect transistor reliability models*

*Eiichi Zaima*  
*Central Research Institute of Electrical Power Industry*  
*Nakano Tokyo Japan*

*for leadership in ultra-high voltage transmission technology and international standards*

*Haijun Zhang*  
*University of Science and Technology Beijing*  
*Beijing China*

*for contributions to radio-resource management in heterogeneous networks*

*YuMing Zhang*  
*University of Kentucky*  
*Lexington KY USA*

*for contributions to robotized welding manufacturing through machine-vision-based intelligence*

*Chenghui Zhang*  
*Shandong University*  
*Jinan Shandong China*

*for contributions to control of renewable energy systems*

2023 NEWLY ELEVATED FELLOWS

*Li Zhang*  
*The Chinese University of Hong Kong*  
*Shatin Hong Kong China*

*for contributions to micro-/nanorobot swarms and platforms for translational biomedicine*

*Zhiru Zhang*  
*Cornell University*  
*Ithaca NY USA*

*for contributions to field-programmable gate array high-level synthesis and accelerator design*

*Youmin Zhang*  
*Concordia University*  
*Montreal QC Canada*

*for contributions to fault diagnosis and fault-tolerant control systems*

*Yao Zhao*  
*Beijing Jiaotong University*  
*Beijing China*

*for contributions to image/video analysis and multimedia content protection*

*Zibin Zheng*  
*Sun Yat-sen University*  
*Guangzhou Guangdong China*

*for contributions to blockchain reliability engineering*

*Xiangyun Zhou*  
*Australian National University*  
*Canberra Australia*

*for contributions to physical layer security and wireless-powered communications*

2023 NEWLY ELEVATED FELLOWS

*Gang Zhou*  
*College of William and Mary*  
*Williamsburg VA USA*

*for contributions to sensor networks and low-power wireless networks*

*Yongxing Zhou*  
*Beijing China*

*for contributions to MIMO Beamforming codebooks and smart spectrum access in wireless networks*

*Haojin Zhu*  
*Shanghai Jiao Tong University*  
*Shanghai China*

*for contributions to Vehicular Networks and Internet-of-Things Security*

*Jun Zhu*  
*Tsinghua University*  
*Beijing China*

*for contributions to machine learning and its applications*

*Zuqing Zhu*  
*University of Science and Technology*  
*Hefei Anhui China*

*for contributions to elastic optical networking and network virtualization*

*Xingquan Zhu*  
*Florida Atlantic University*  
*Boca Raton FL USA*

*for contributions to data mining for big data analytics and network representation learning*

2023 NEWLY ELEVATED FELLOWS

*Chengqing Zong  
National Laboratory of Pattern  
Recognition Beijing China*

*for contributions to machine translation and natural language processing*