

IEEE Fellow Class of 2025

The grade of Fellow recognizes unusual distinction in the profession and is reserved for a person with an outstanding record of accomplishments in any of the IEEE fields of interest. The accomplishments that are being honored have contributed importantly to the advancement or application of engineering, science and technology, bringing the realization of significant value to society at large.

Balu Adsumilli

Google Inc.
CA, USA

for contributions to video processing and pervasive user-generated online video content

Tareq Y. Al-Naffouri

King Abdullah University of Science and Technology
Saudi Arabia

for contributions to adaptive signal processing and applications to wireless communications

Dionysios C. Aliprantis

Purdue University
IN, USA

for contributions to rotating electric machine modeling and distributed energy resources

John Yiannis Aloimonos

University of Maryland, College Park
MD, USA

for contributions to active perception and the perception of action

Ron Alterovitz

University of North Carolina at Chapel Hill
NC, USA

for contributions to medical steerable needles and motion planning for medical robots

Giulio Antonini

University L'Aquila
Italy

for contributions to the advancement of electromagnetic and circuit modeling of electrical systems

Rodolfo Araneo

Sapienza University of Rome
Italy

for contributions to electromagnetic shielding and EMC design of grid-scale photo-voltaic plants

Ana C. Arias

University of California Berkeley
CA, USA

for contributions to printed and flexible large-area electronics

Solomon Assefa

IBM T. J. Watson Research Center
NY, USA

for contributions to the development and commercialization of silicon photonics

Waheed Uz Zaman Bajwa

Rutgers University
NJ, USA

for contributions to compressed sensing, communications, and machine learning in distributed systems

Peter M. Barbosa

Delta Electronics, Inc.
NC, USA

for contributions to multilevel power conversion in medium voltage drives

Mike Barnes

University of Manchester
United Kingdom

for contributions to power electronic converter modeling for system studies

Raheem A. Beyah

Georgia Tech
GA, USA

for contributions in rogue device detection in the field of cybersecurity

Shalabh Bhatnagar

Indian Institute of Science
India

for contributions to stochastic recursive algorithms for optimization, control, and reinforcement learning

Jessica J. Bian

Grid-X Partners, LLC
NJ, USA

for contributions to bulk power system reliability improvement and advances in power flow controllers

Battista Biggio

University of Cagliari, Italy
Italy

for contributions to the security of machine learning

Hans O. Bjorklund

Hitachi Energy
Sweden

for leadership in the development of HVDC control and protection systems

Carlos Bordons

University of Seville
Spain

for contributions to Model Predictive Control of industrial processes and energy systems

Paolo Braca

NATO Science and Technology Organization (STO) Centre for Maritime Research and Experimentation (CMRE)
Italy

for contributions to advancements in networked surveillance systems

Michael Scott Brown

Samsung AI Research Center
ON, Canada

for contributions to in-camera color image processing

Yuriy Brun

University of Massachusetts Amherst
MA, USA

for contributions to software bias mitigation and to software engineering automation

Shujun Cai

Wuxi Microelectronics Research Center
China

for contributions to GaN microwave devices for RF systems applications

Liangliang Cao

Apple, Inc.
CA, USA

for contributions to computer vision and speech recognition with significant industrial impacts

Yang Chai

Hong Kong Polytechnic University
Hong Kong

for contributions to bioinspired in-sensor computing

Aranya Chakraborty

North Carolina State University
NC, USA

for contributions to wide-area monitoring and control of electric power systems

Yuen-Yan Chan

Chinese University of Hong Kong
Hong Kong

for contributions to learning technologies for special education needs and social inclusion

Balarko Chaudhuri

Imperial College London
United Kingdom

for contributions to control and stability of AC-DC grid systems

Huanhuan Chen

University of Science and Technology of China
China

for contributions to theory and applications of statistical and explainable machine learning

Jingsheng Chen

National University of Singapore
Singapore

for contributions to magnetic materials and heterostructures for Magnetic Recording Technology and Spintronics

Pai-Yen Chen

University of Illinois Chicago
IL, USA

for contributions to mesoscopic and multiscale electromagnetics for antenna and sensor applications

Pin-Yu Chen

IBM T. J. Watson Research Center
NY, USA

for contributions to machine learning robustness and AI safety

Tsong Yueh Chen

Swinburne University of Technology
Australia

for contributions to software testing through the invention of metamorphic testing and adaptive random testing

Xiaofeng Chen

Xidian University
China

for contributions to verifiable computation and verifiable storage in cloud computing

Xueqi Cheng

Institute of Computer Technology, Chinese Academy of Sciences
China

for contributions to web search and social network analysis

Nagendra Srinivas Cherukupalli

FTC Solar Inc
CA, USA

for contributions to advancements in utility-scale solar power plants and rural energy technologies

Kyungwhoon Cheun

Samsung Electronics
Korea, Republic of

for leadership in 5G mmWave and vRAN technologies

Mandar Chitre

National University of Singapore
Singapore

for contributions to underwater acoustic interference modeling and development of acoustic communication networking protocols

Huang-Jen Chiu

National Taiwan University of Science and Technology
Taiwan

for contributions to energy-saving high-efficiency power converters for sources and loads

Sungbae Cho

Yonsei University
Korea, Republic of

for contributions to hybrid artificial intelligent systems for industrial applications

Hongsoo Choi

Daegu Gyeongbuk Institute of Science & Technology
Korea, Republic of

for contributions to the development and implementation of medical tethered and untethered microrobots

Xiaowen Chu

The Hong Kong University of Science and Technology (Guangzhou)
China

for contributions to algorithms for communication-efficient distributed machine learning

Oksana Chubykalo-Fesenko

Spanish National Research Council, CSIC
Spain

for development of multiscale methods for modeling of thermal magnetization dynamics

Craig A. Colopy

WI, USA

for contributions to design, development, and application of single-phase 32-step voltage regulators

Julio C. Costa

Global Foundries
NC, USA

for contributions to the development of RF silicon-on-insulator technologies and circuits for mobile applications

Simon Cotton

ECIT Institute, Queen's University Belfast
United Kingdom

for contributions to the modelling of fading channels

Vittorio Curri

Politecnico di Torino
Italy

for contributions to physical layer aware multi-band open optical networks

Qionghai Dai

Tsinghua University
China

for contributions to 3D content understanding and computational imaging

Davide Dardari

University of Bologna
Italy

for contributions to theory and practice of radio positioning systems

Arati Dasgupta

U.S. Naval Research Laboratory
DC, USA

for contributions to high energy density plasma, atomic, and radiation physics

Ronald F. Demara

University of Central Florida
FL, USA

for contributions to runtime reconfigurable computing and resilient datapath design

Robert A. Dent

NJ, USA

for leadership in enriching the history of electric power industry and contributions to its technology

Liping Di

George Mason University
VA, USA

for contributions to geoinformatic technology for Earth observations

Stefano Di Cairano

Mitsubishi Electric Research Laboratories
MA, USA

for contributions to model predictive and constrained control in automotive and aerospace applications

Whitfield Diffie

Independent Advisor
CA, USA

for the development of public key cryptography and its applications

Denis Dochain

Ecole Polytechnique de Montréal
Belgium

for contributions to analysis, estimation and control of reaction systems

Hairong Dong

China State Key Laboratory of Rail Traffic Control and Safety, Beijing Jiatong University
China

for contributions to the intelligent and autonomous operation and control of railway transportation systems

Chunxia Dou

Jiangsu Provincial Engineering Research Center for Zero-carbon Operation Control of Active Distribution Network
China

for contributions to power system control and industrial applications

Tomislav Dragicevic

Technical University of Denmark
Denmark

for contributions within control, design and diagnostics of power converter and drive-based systems

Drazen Dujic

Swiss Federal Institute of Technology of Lausanne, Switzerland
Switzerland

for contributions to medium-voltage high-power solid-state conversion

Larry Dunleavy

Modelithics, Inc.
FL, USA

for contributions to commercial development of microwave device models and microwave education leadership

David B. Durocher

CEM Service LLC
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for technical leadership in electrical system reliability and personnel safety

Christopher Edwards

University of Exeter
United Kingdom

for contributions to sliding mode control and fault tolerant control

Kamran Entesari

Texas A&M University
TX, USA

for contributions to millimeter-wave high-efficiency front ends and high-linearity mixer-first receivers

Melike Erol Kantarci

University of Ottawa
ON, Canada

for contributions to AI-enabled wireless networks and smart grid communications

Christian Fager

Chalmers University of Technology
Sweden

for contributions to RF power amplifier efficiency enhancement and modeling of transmitter distortion

Tiago H. Falk

University of Quebec
ON, Canada

for contributions to cognitive computing for adaptive, context-aware human-machine systems

Serge Fdida

Sorbonne University
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for contributions to federated network research testbeds at scale, and quality of service

Mehdi Ferdowsi

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for contributions to high-gain converters for renewable energy applications and to battery management systems

Baris Fidan

University of Waterloo
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for contributions to adaptive control and cooperative estimation with vehicular, robotic, and sensor network applications

Tim Fingscheidt

Technische Universitaet Braunschweig
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for contributions to speech enhancement systems and their evaluation

Carlo Fischione

KTH Royal Institute of Technology
Sweden

for contributions to the theory and practice of wireless internet of things

Frank H. Fitzek

TU Dresden
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for contributions to cooperative wireless communications for tactile internet and 5G networks

Gabor A. Fodor

Ericsson AB
Sweden

for contributions to radio resource management and optimization of cellular networks

Nelson J. Fonseca

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France

for contributions to microwave beamforming techniques and technologies in terrestrial and space wireless communication systems

Daniele Fontanelli

University of Trento
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for contributions to measurement and real-time estimation algorithms in robotics

Jeffrey B. Fowlkes

University of Michigan
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for contributions to therapeutic ultrasound and the understanding of acoustic cavitation in medicine

Alejandro C. Frery

Victoria University of Wellington
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for contributions to statistical signal processing in earth observation data

Yong Fu

Mississippi State University
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for contributions to computational optimization and parallel computing for power system operation

Tammy L. Gammon

John Matthews and Associates, Inc.
GA, USA

for contributions to the reduction of electrical injuries and deaths

Sinan Gezici

Bilkent University
Turkiye

for contributions to wireless localization and ultra-wideband systems

Kamran Ghorbani

Royal Melbourne Institute of Technology
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for contributions to microwave sensors and multifunctional microwave structures

Swaroop Ghosh

Pennsylvania State University
PA, USA

for contributions to design and security of memories in technology nodes

Brian P. Ginsburg

Texas Instruments, Inc.
TX, USA

for contributions to CMOS mm-wave radars

John C. Grundy

Monash University
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for contributions to automated software engineering

Saikat Guha

University of Arizona
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for bridging information theory and physics to design quantum-enhanced photonic sensing, communications, and networking systems

Jing-Ming Guo

National Taiwan University of Science and Technology
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for contributions to digital halftoning and image/video analysis for consumer applications

L. Jay Guo

University of Michigan
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for contributions to nanoimprint, scalable nanopatterning

Indranil Gupta

University of Illinois at Urbana-Champaign
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for contributions to reliable large-scale distributed systems

Hiroshi Harada

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for technical leadership and contributions in wireless smart utility networks and software-defined cognitive radio

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for contributions to laser-produced plasma fundamentals and applications

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for contributions to big data systems in the areas of many-core architectures and cloud-based systems

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for contributions to face analysis and image synthesis

Wei He

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for contributions to intelligent control and applications of unmanned systems

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for contributions to topology control and leadership in applying risk management to power systems

Amr S. Helmy

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for contributions to harnessing optical non-linearities in diode lasers for quantum and non-linear photonics applications

Kenichi Higuchi

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for contributions to cellular wireless communications technology and standards

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for leadership in multimedia communication and cloud-based software systems

Mingyi Hong

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for contributions to optimization in signal processing, wireless communication and machine learning

Timothy Hospedales

University of Edinburgh
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for contributions to data-efficient machine learning and meta-learning

Jiankun Hu

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for contributions to biometrics security and anomaly intrusion detection

Xiangji Huang

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for contributions to information retrieval, web search, natural language processing, conversational systems, and their applications

Xin Huang

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for contributions to feature extraction and machine learning in remote sensing

Yongming Huang

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for contributions to signal processing for mmWave and MIMO wireless communications

Zi Huang

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for contributions to multi-modal data management

Chih-Ming Hung

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for contributions to CMOS digitally-assisted RF designs

Chih-Pin Hung

Advanced Semiconductor Engineering Group
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for leadership in developing and commercializing high density interconnect packaging

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for contributions to telecommunication and timing systems in electric power utilities

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for contributions to high-power density power converters based on circuit topology

Ho-Ching Lu

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for contributions to nonlinear analysis of power electronics circuits and systems

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for contributions to research and education for operating systems and software security

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for contributions to sensors and systems for digital health paradigms

Aamer Jaleel

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for contributions to High-Performance Cache Design and Memory-Aware Scheduling

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for contributions to high resistance metrology and measurement standards and techniques

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for contributions to optical communication systems and broadband access networks

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for contributions to context-aware search and language scaling approaches

Xingliang Jiang

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for contributions to prevention of icing events and external insulation design of high-voltage transmission lines

Mikael Johansson

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for contributions to computational analysis and optimization of hybrid and networked systems

Joaquim A. Jorge

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for contributions to sketch-based interfaces, modeling and virtual reality

Raphael M. Jungers

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for contributions to an algorithmic theory of hybrid systems

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for contributions to colloidal nanocrystals and their integration in optical and optoelectronic devices

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for contributions to blockchain and game theory applied to cybersecurity

Maarten J. Kamper

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for contributions to electrical machine design optimization and application of synchronous machines

Masoud Karimi Ghartemani

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for contributions to synchronization, modeling and control of power electronic converters in dc/ac applications

Andrew J. Keane

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for contributions to the integration of resources into energy distribution systems

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for contributions to software-defined communication networks and cross-layer network design

Christopher M. Kellett

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for contributions to analysis and control of nonlinear systems

Farshad Khorrami

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for contributions to adaptive nonlinear control and applications to robotics, unmanned systems, and cyber-physical systems

John Kim

KAIST
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for contributions to the design and analysis of high-performance interconnection network architectures

Younsun Kim

Samsung Electronics
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for contributions and leadership in 5G physical layer standardization

Mustafa Kizilcay

University of Siegen
Germany

for contributions to modeling and simulation of power system electromagnetic transients

Thierry E. Klein

Nokia Bell Labs
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for contributions to communication and networking technologies in multiple vertical industry sectors

Alexander Koelpin

Hamburg University of Technology
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for contributions to microwave interferometry and six-port technology

Samir Kouro

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for contributions to power converter topologies and control in energy transition

Andreas R. Krause

ETH Zurich
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for contributions to active sensing, Bayesian optimization, and learning-based control

Christopher I. Kruegel

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for contributions to security, malware detection and vulnerability analysis

Krzysztof Kulpa

Warsaw University of Technology (WUT)
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for contributions to passive radar

Bennett A. Landman

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for contributions to MRI harmonization and data-driven modelling in medical image processing

Jacqueline J. Le Moigne

NASA Headquarters Science Mission Directorate (SMD)/Earth Science Division (ESD) Earth Science Technology Office (ESTO)
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for contributions to satellite image registration and intelligent space systems design

Jae Sung Lee

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for contributions to positron emission tomography and hybrid imaging systems and technologies

Sanghoon Lee

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for contributions to the modeling of human visual perception and processing of visual signals

Max Lemme

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Germany

for contributions to the development of graphene-based electronic devices

Debra Lew

Energy Systems Integration Group
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for contributions to grid integration of wind and solar power

Dan Li

Tsinghua University
China

for contributions to data center network designs

Jinyu Li

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for contributions to deep-learning-based speech technology innovation and commercialization

Jr-Shin Li

Washington University in St. Louis
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for contributions to ensemble control systems theory and applications to quantum and biological systems

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for contributions to mobile edge computing and wireless federated learning

Maokun Li

Tsinghua University
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for contributions to nonlinear inversion algorithms for subsurface imaging

Zan Li

Xidian University
China

for contributions in theoretical foundations and system development of spectrum monitoring and cognition-based secure communications

Zuyi Li

Zhejiang University
China

for contributions to functional microgrid design and microgrid cybersecurity analyses

Jiye Liang

Shanxi University
China

for contributions to multi-granularity data modeling and graph data mining

Shengcai Liao

United Arab Emirates University
United Arab Emirates

for contributions to face and person image analysis and recognition

Hyesook Lim

Ewha Womans University
Korea, Republic of

for leadership in the field of information and communication technology

Cheng-Tsung Liu

National Sun Yat-sen University
Taiwan

for contributions to next-generation high-efficiency synchronous reluctance motor designs

Jiajia Liu

Northwestern Polytechnical University
China

for contributions to vehicular edge computing and security, wireless mobile network evaluation, and optimization

Jiaying Liu

Peking University
China

for contributions to intelligent visual compression and enhancement

Lingjia Liu

Virginia Tech
VA, USA

for contributions to multi-cell multi-user MIMO and intelligent spectrum access

Ying Liu

Xidian University
China

for contributions to the development of antennas with low radar cross-section

Yunxin Liu

Tsinghua University
China

for contributions to the design and development of intelligent and efficient mobile systems

Karen Livescu

Toyota Technological Institute at Chicago
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for contributions to multi-view and pre-trained speech representation learning

Oscar Lucia

University of Zaragoza
Spain

for contributions to power conversion for induction heating

Xin Luo

Southwest University
China

for contributions to big data analytics, recommender systems and graph learning

Chengbin Ma

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China

for contributions to design and control for high-frequency wireless power transfer and hybrid energy storage

Yanwei Ma

Institute of Electrical Engineering, Chinese Academy of Sciences
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for contributions to the development and applications of MgB₂ and iron-based superconducting wires

Yiorgos Makris

The University of Texas at Dallas
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for contributions to machine-learning-based design of trusted and reliable integrated circuits

Sebastien Marcel

Université de Lausanne
Switzerland

for contributions to biometric presentation attack detection

Santiago Marco

University of Barcelona
Spain

for contributions to the use of signal processing and machine learning in chemical sensing systems

Mahesh K. Marina

University of Edinburgh
United Kingdom

for contributions to software-oriented mobile networking systems and data-driven networking methods

Slava A. Maslennikov

ISO New England
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for contributions to reliable electric power systems monitoring and mitigation of natural and forced oscillations

Mohammad Ali Sherkat Masoum

Utah Valley University
UT, USA

for contributions to EV-charging considering power quality

Yuri Masuoka

Samsung Electronics
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for contributions to leading-edge foundry transistor development

Yasuyuki Matsushita

Microsoft Research
Japan

for contributions to photometric 3D modeling and computational photography

James R. Mcdonald

University of Strathclyde
United Kingdom

for contributions to advance power engineering research and education

Mark A. Mcvey

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for contributions to standards for stability and deployment of reactive power control technology

Matteo Meneghini

University of Padova
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for contributions to the reliability of wide bandgap electronic and optoelectronic devices

Patrick P. Mercier

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for contributions to low-power and energy-efficient circuits and systems

James Misener

Qualcomm Inc.
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for leadership in developing and deploying V2X communications

Sukumar Mishra

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for contributions to microgrid control and smart charging technologies

Vishal Monga

Pennsylvania State University
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for contributions to computationally efficient image analysis and restoration

Shayan Mookherjea

University of California, San Diego
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for contributions to optoelectronic devices and their applications

Pedro J. Moreno

Google Inc.
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for contributions to speech recognition and industrial-scale internationalization of automated speech processing

Ali Mosleh

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CA, USA

for innovative advancements in Bayesian models for risk and reliability analysis

Rana Mukerji

NYISO
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for leadership in the design and implementation of wholesale electricity markets

Debdeep Mukhopadhyay

Indian Institute of Technology-Kharagpur
India

for contributions to design and analysis of hardware security primitives

Ramakrishna Mukkamala

University of Pittsburgh
PA, USA

for contributions to advanced hemodynamic monitoring and cuffless blood pressure measurement

Rajen Manicon Murugan

Texas Instruments, Inc.
TX, USA

for contributions to multiphysics co-design and characterization methods of advanced heterogeneous packages

Nirmal K. C. Nair

University of Auckland
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for contributions towards secure renewables grid integration

Shinohara Naoki

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for contributions to wireless power transfer technologies and applications

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University of Ottawa
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for contributions to wireless ad hoc networks and cybersecurity

Hans Toya Nembach

National Institute of Standards and Technology
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for contributions to the development of novel magnetodynamic measurements of thin films and nanostructures

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for contributions to cybersecurity, trust and privacy in distributed systems

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for contributions to flexible organic electronics used in large-area imagers and sensing systems

Hien Q. Ngo

Queen's University of Belfast
United Kingdom

for contributions to cellular and cell-free massive MIMO

Pavel Nikitin

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for contributions to the analysis and design of RFID tags and systems

Yoshifumi Nishio

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for contributions to new nonlinear phenomena and effective model creation for large coupled nonlinear systems

Stuart F. Oberman

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for contributions to GPU computing for artificial intelligence

Umit Y. Ogras

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for contributions to networks-on-chip for heterogeneous manycore architectures

Hendrik Ohldag

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for contributions to studies of magnetic materials with novel x-ray techniques at high spatio-temporal resolution

William D. Oliver

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for contributions to superconductive quantum computing technology and its teaching

Timothy J. Oshea

DeepSig
VA, USA

for contributions to deep learning for physical layer communications and sensing

Ram Bilas Pachori

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for contributions to application of signal decomposition methods to biomedical engineering

Willie J. Padilla

Duke University
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for contributions to the field of metamaterials, including perfect absorbers and active devices

Sinno Pan

The Chinese University of Hong Kong
Hong Kong

for contributions to transfer learning methodologies

Aarno Parssinen

University of Oulu
Finland

for contributions to direct conversion and digital RF transceivers and hardware-aware communications systems

Simone Paulotto

Apple, Inc.
CA, USA

for contributions to 5G mm-wave and leaky-wave antennas

Lacra Pavel

University of Toronto
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for contributions to game theory, control, and optimization for network systems

Wen-Hsiao Peng

National Yang Ming Chiao Tung University
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for contributions to the design and implementation of video coding algorithms and standards

Mauricio Pereira Da Cunha

University of Maine
ME, USA

for contributions to the commercialization of harsh-environment microwave acoustics materials, sensors and systems

Jamie Phillips

University of Delaware
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for contributions to quantum dot infrared photodetector and microscale photovoltaic energy harvesting

Angelo Pinto

Intel Corporation
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for technical leadership and contributions to FinFET technology adoption into volume manufacturing of mobile products

Nils H. Pohl

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Germany

for contributions to wideband and ultra-precise millimeter-wave radar sensors

Radu-Emil Precup

Politehnica University of Timisoara
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for contributions to fuzzy and data-driven control of servo systems

Nuria Gonzalez Prelcic

University of California, San Diego
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for contributions to millimeter wave wireless communications

Malin Harindhu Premaratne

Monash University
Australia

for contributions to theory, modelling, and simulations of optical quantum devices

Kai Qin

Swinburne University of Technology
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for contributions to synergy machine learning and intelligent optimization

Maxim Raginsky

University of Illinois
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for contributions to information-theoretic analysis of stochastic systems in optimization and machine learning

Suresh Ramalingam

AMD, Inc.
CA, USA

for leadership in technology innovation to commercialize 2.5D Silicon interposer

Julio Romero Aguero

Quanta Technology
TX, USA

for leadership in the development of methodologies for modernization of power distribution systems

Philip Rubin

Haskins Laboratories
CT, USA

for contributions in speech synthesis and analysis, neuroscience, and ethics of research and technology

Jee-Hwan Ryu

KAIST
Korea, Republic of

for contributions to passivation and stability-assured control in haptics and telerobotics

Ahmed K Sadek

Qualcomm Inc.
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for contributions to the leadership and development of automated driving and cellular in unlicensed spectrum

Luca Sanguinetti

University of Pisa
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for contributions to signal processing of multi-antenna and multi-cell wireless communications

Costas D. Sarris

University of Toronto
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for contributions to microwave and electromagnetic field computations

Davide Scaramuzza

University of Zurich, Switzerland
Switzerland

for contributions to micro-drones visual navigation and robust perception with event cameras

Patrick R. Schaumont

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for contributions to the implementation and evaluation of hardware security

Christian Schuster

Hamburg University of Technology
Germany

for contributions to physics-based modeling, design, and optimization of interconnects in servers and networking equipment

Michael Lewis Seltzer

Meta
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for contributions to speech recognition

Kaushik Sengupta

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for contributions to millimeter-Wave and terahertz technology in silicon-based integrated circuits

Abdallah A. Shami

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for contributions to methods for virtualized networks and optical access design

Satish K. Sharma

San Diego State University
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for contributions to antennas design for satellite and radar applications

Xu She

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for contributions to power conversion technologies and system architectures for sustainable energy utilization in industry

Min Sheng

Xidian University
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for contributions to interference and resource management in space-air-ground networks

Jin-Wei Shi

National Central University
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for contributions to high-speed photodetectors and VCSELs for optics fiber communications

Yi Shi

Virginia Tech
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for contributions to wireless network performance optimization and wireless security

Zhiguo Shi

Zhejiang University
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for contributions to array signal processing with applications to UAV surveillance

Masayuki Shigematsu

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for contributions to realization of low loss optical transmission lines and gain flattened optical amplifiers

Byonghyo Shim

Seoul National University
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for contributions to sparse signal processing and multi-antenna technology

Manuel Sierra Castaner

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for contributions to antenna measurement techniques and planar antennas design

Biplab Sikdar

National University of Singapore
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for contributions to the security and privacy of the Internet-of-Things and cyber-physical systems

Chow-Yen-Desmond Sim

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for contributions to the practical design and application of high-isolation broadband antennas and arrays

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Sandia National Laboratories
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for contributions to radiography diagnostics and magneto-inertial fusion

Radan Slavik

University of Southampton
United Kingdom

for contributions to coherent all-optical signal processing and hollow core fiber development

James J. Sluss

University of Oklahoma
OK, USA

for contributions to advancing global engineering education through entrepreneurship and professional development

Larry Smarr

University of California, San Diego
CA, USA

for contributions to supercomputing and metacomputer cyberinfrastructure

Noah Snavely

Google Inc.
NY, USA

for contributions to computer vision and computer graphics

Francesco Soldovieri

National Research Council of Italy (CNR), Institute for Electromagnetic Sensing of the Environment
Italy

for contributions to theoretical analyses of inverse problems, microwave tomography, and their applications

Peilin Song

IBM T. J. Watson Research Center
NY, USA

for contributions to imaging-based integrated-circuit diagnostics and detection

Wen Liang Soong

University of Adelaide
Australia

for contributions to performance improvement and high-speed operation of permanent magnet synchronous machines

Asgeir J. Sorensen

Norwegian University of Science and Technology
Norway

for contributions to autonomous robotic platforms and certification of control systems for marine operations

Alexander Sprintson

Nokia Bell Labs
TX, USA

for contributions to wireless network coding and network security

Kai Strunz

Technische Universitaet Berlin (TU Berlin)
Germany

for contributions to multi-scale modeling and control of AC-DC power and energy systems

Nan Sun

Tsinghua University
China

for contributions to noise-shaping ADC and mixed-signal circuits

Xiao Wei Sun

Southern University of Science and Technology
China

for contributions to optoelectronic materials and devices

Teruhiko Suzuki

Sony Corporation
Japan

for contributions to video coding for professional and consumer products

Rajasekaran Swaminathan

Advanced Micro Devices Inc.,
TX, USA

for leadership in chiplets technology architectures for high-performance computing

Thomas L. Szabo

Verasonics, Inc.
MA, USA

for contributions to ultrasound education and establishing technical standards

Csaba Szepesvari

Google DeepMind
AB, Canada

for contributions to the theory of sequential decision making under uncertainty

Rahim Tafazolli

The University of Surrey
United Kingdom

for contributions in wireless communications

Makoto Takamiya

The University of Tokyo
Japan

for contributions to digitally controlled integrated power management circuits

Sheldon Xiangdong Tan

University of California, Riverside
CA, USA

for contributions to reliability and thermal modeling and analysis of integrated circuits

Adrian J. Tang

NASA Jet Propulsion Laboratory / Caltech
CA, USA

for contributions to Millimeter-Wave Systems-on-Chip Instruments for space science

Kea-Tiong Tang

National Tsing Hua University
Taiwan

for contributions to smart miniature electronic nose circuits and systems

Xiaohu Tang

School of Information Science & Technology, Southwest Jiaotong University
China

for contributions to sequence design in wireless communications and coding in distributed systems

Ed G. teNyenhuis

Hitachi Energy
ON, Canada

for technical leadership in transformer design, industry standards, and power transformer services

Han Wui Then

Intel Corporation
OR, USA

for the development and heterogeneous integration of GaN electronics on 300-mm Silicon wafers

Michael J. Thompson

Schweitzer Engineering Laboratories, Inc.
IL, USA

for contributions to standardization and guidelines for modern protection technologies

Daxin Tian

Beihang University
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for contributions to vehicular communications and networking

Dong Tian

InterDigital
MA, USA

for contributions to 3D video compression, processing, and analysis

Julian Togelius

New York University
NY, USA

for contributions to procedural content generation and artificial intelligence in video games

Cristiano Tomassoni

Univeristy of Perugia
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for contributions to miniaturized microwave filters and additive manufactured filters

Xiaohua Tong

Tongji University
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for contributions to planetary photogrammetric mapping and remote sensing for lunar and martian exploration

Natalia A. Trayanova

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for contributions to personalized digital-twins and AI in arrhythmia diagnosis and treatment

Dina H. Triyoso

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for contributions to high-k metal gate complementary metal-oxide-semiconductor technology

Jeffrey Y. Tsao

Sandia National Laboratories
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for contributions to semiconductor-epitaxy and solid-state-lighting technologies

Alfredo Vaccaro

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for contributions to power system analysis with data uncertainty

Dirk Van Hertem

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for contributions to the development of high-voltage DC grids

Vincent O. Vanhoucke

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for contributions to deep learning applied to perception and robotics

Rajiv K. Varma

University of Western Ontario
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for contributions in developing technology for static synchronous compensators

Nalini Venkatasubramanian

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for contributions to the foundations of adaptive software and its application in enhancing community safety

Jiafu Wan

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China

for contributions to resource interconnection and reconfiguration of the internet of manufacturing things

Caisheng Wang

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for contributions to modeling and control of distributed alternative energy systems and battery storage management

Xinran Wang

Nanjing University
China

for contributions to the fabrication and device application of low-dimensional semiconductors

Brent Waters

The University of Texas at Austin
TX, USA

for contributions to cryptography and attribute-based encryption

Hung-Yu Wei

National Taiwan University
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for standardization of edge/fog computing and innovation in wireless relay networking technologies

Gordon Wetzstein

Stanford University
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for contributions to computational imaging and display systems

Adam Wierman

California Institute of Technology
CA, USA

for contributions to algorithms and scheduling theory in sustainable computing

Steve Wilton

University of British Columbia
BC, Canada

for contributions to debugging methodologies and low-power FPGAs

Robert Wisniewski

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NY, USA

for leadership in high-performance computing software and systems

Chuan Wu

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for contributions to resource scheduling in cloud computing and distributed machine learning systems

Fangxiang Wu

University of Saskatchewan
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for contributions to computational intelligence techniques for biomedical data analytics

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University of Arkansas
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for contributions to the modeling and energy efficient design of wireless communication systems

Wei-Li Wu

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for contributions to study of data communication and processing in wireless sensor networks

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for contributions to HF radar metocean inversion methods, measurement campaigns, and validation

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University of Delaware
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for contributions to spin-polarized transport and spin dynamics in magnetic heterostructures

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for contributions to learning based wireless security

Kaigui Xie

Chongqing University
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for contributions to power system reliability

Chunsheng Xin

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for contributions to secure resource sharing and core network control for resilient computing

Hongkai Xiong

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for contributions to multi-scale multimedia signal representation, coding and communication

Hao Xu

Qualcomm Inc.
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for leadership in development of radio propagation and MIMO technology in mobile communications

Jianliang Xu

Hong Kong Baptist University
Hong Kong

for contributions to mobile data management and trustworthy query processing

Jie Xu

The Chinese University of Hong Kong, Shenzhen
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for contributions to wireless information and power transfer and unmanned aerial vehicle enabled wireless networks

Qingsong Xu

University of Macau
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for contributions to the design and control of robotic micro-and nano-positioning and manipulation systems

Sheng Xu

University of California, San Diego
CA, USA

for contributions in developing wearable electronics for monitoring deep tissue of the human body

Wei Xu

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China

for contributions to hybrid MIMO transceiver design and distributed optimization for wireless networks

Zhen Xu

University of Michigan-Ann Arbor
MI, USA

for development and clinical translation of non-invasive mechanical ultrasound ablation technology

Hyunsoo Yang

National University of Singapore
Singapore

for contributions to controlling spintronic materials and devices for memories and terahertz technology

Jianhua Yao

Tencent AI Lab
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for contributions to computer aided diagnosis, computational genomics and healthcare AI product development

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for leadership in engineering technology accreditation and education

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for contributions to the modeling, analysis, and control of power-electronically interfaced distributed energy resources

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for contributions to the development of sensing networks, systems, and applications

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for contributions to automatic facial behavior analysis and recognition

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for contributions to energy-efficient AI chip architectures

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for contributions to fast magnetic resonance imaging with sparse sampling

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for contributions to mobility management and network security

Hanwen Yu

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for contributions to InSAR phase unwrapping and its applications

Wenjian Yu

Tsinghua University
China

for contributions to parasitic extraction, circuit simulation and related numerical methods

Jing Yuan

Microsoft
China

for contributions to trajectory data mining and social computing

Mehmet R. Yuce

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for contributions to wireless wearable body sensors and self-powered sensors

Regan A. Zane

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for contributions to modular power conversion in energy harvesting, lighting, and electrified transportation systems

Alessio Zappone

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for contributions to the energy-efficient design of wireless communication networks

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for contributions to generative model-based speech synthesis

Yong Zeng

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China

for contributions to unmanned aerial vehicle communications and wireless power transfer

Guangtao Zhai

Shanghai Jiao Tong University
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for contributions to perceptual quality assessment and enhancement of visual media

Bo Zhang

Tsinghua University
China

for contributions to electromagnetic environment effects in power systems

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Delta Electronics, Inc.
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for leadership in LLC-SRC converter design and engineering applications

Shuai Zhang

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for contributions to antennas for mobile communications

Xingyi Zhang

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for contributions to evolutionary multi-objective optimization

Xinmiao Zhang

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for contributions to error-correcting codes and VLSI implementations

Yanning Zhang

Northwestern Polytechnical University
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for contributions in dynamic visual information reconstruction and recognition

Yong Zhang

City University of Hong Kong
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for contributions to the development of functional materials and devices for biomedical applications

Yongchang Zhang

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for contributions to control of motor drives and converters

Yongdong Zhang

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for contributions to Internet multimedia processing and analysis

Peter D. Zhao

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for contributions to the development of safer, more reliable and explosion-resistant bushing and transformer standards

Jie Zhou

Tsinghua University
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for contributions to visual content recognition and search

Liang Zhou

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for contributions to massive multimedia transmission and computing

Wanlei Zhou

City University of Macau
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for contributions to cyber security and privacy

Haibin Zhu

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for contributions to collaboration theory, models, and systems

Hongtu Zhu

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for contributions to data integration in medical imaging and genetics, and applying learning in ridesharing

Mingjian Zuo

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for contributions in system reliability assurance and prognostics and health management of engineering systems