2018 Newly Elevated Fellows

Pieter Abbeel
University of California - Berkeley
Berkeley, CA, USA

for contributions to apprenticeship and reinforcement learning for robotics and autonomous systems

Pamela Ann Abshire
Silver Spring, MD, USA

for contributions to CMOS biosensors

Haithem Abu-rub
Texas A&M University
College Station, TX, USA

for contributions to power electronic converters for renewable energy applications

Erik Agrell
Chalmers University of Technology
Goteborg, Sweden

for contributions to coding and modulation in optical communications

Fauzia Ahmad
Temple University
Philadelphia, PA, USA

for contribution to through-the-wall radar imaging

Anastasia Ailamaki
Ecole Polytechnique Federale de Lausanne
Lausanne, Switzerland

for contributions to hardware-conscious database systems and scientific data management

Matteo Albani
Firenze, Italy

for contributions to the uniform geometrical theory of diffraction

Andrew Alleyne
University of Illinois
Urbana, IL, USA

for contributions to the control of thermal management systems
2018 Newly Elevated Fellows

Pietro Andreani
Lund University
Lund, Sweden

for contributions to CMOS integrated voltage-controlled oscillators

Walid Aref
Purdue University
West Lafayette, IN, USA

for contributions to spatio-temporal database indexing and query processing

Kohtaro Asai
Mitsubishi Electric Corporation
Tokyo, Japan

for contributions to video coding development and standardization

Hajime Asama
University of Tokyo
Tokyo, Japan

for contributions to distributed autonomous robotic systems

Bertan Bakkaloglu
Arizona State University-Tempe
Scottsdale, AZ, USA

for contributions to radio frequency circuits

Bijnan Bandyopadhyay
IIT Bombay
Mumbai, India

for contributions to discrete-time, multi-rate, output feedback sliding-mode control

Paul Barford
University of Wisconsin
Madison, WI, USA

for contributions to Internet measurement and security
2018 Newly Elevated Fellows

N. Scott Barker
University of Virginia
Charlottesville, VA, USA

_for contributions to millimeter-wave and terahertz micromachining_

Erik Blasch
US Dept. of Air Force
Rome, NY, USA

_for leadership in aerospace information fusion systems_

Glenn Boreman
University North Carolina at Charlotte
Charlotte, NC, USA

_for contributions to optical and infrared antenna technologies_

Vicente Boria
Universidad Politecnica de Valencia
Valencia, Spain

_for contributions to high-power microwave filters and multiplexers_

Timothy Boykin
University of Alabama
Huntsville, AL, USA

_for contributions to atomistic models for semiconductor device simulation_

Maurizio Bozzi
University of Pavia
Pavia, Italy

_for contributions to substrate integrated waveguides and integrated periodic structures_

Oliver Brock
Technische Universität Berlin
Berlin, Germany

_for contributions to mobile manipulation and grasping_
2018 Newly Elevated Fellows

Alexander Bronstein
Tel Aviv University
Tel Aviv, Israel

for contributions to three-dimensional geometric processing in imaging

Charles Bunting
Oklahoma State University
Stillwater, OK, USA

for educational contributions to electromagnetic compatibility and reverberation chambers

Karen Butler-Purry
Texas A&M University
College Station, TX, USA

for contributions to expanding minority participation in power systems education

Marco Caccamo
University of Illinois at Urbana-Champaign
Urbana, IL, USA

for contributions to the theory and applications of hard real-time multicore computing

Yigang Cai
Naperville, IL, USA

for innovations in high-speed wireless networks

Giuseppe Calafiore
Politecnico di Torino
Torino, Italy

for contributions to probabilistic methods for robust control design

Jeffrey Calame
Annapolis, MD, USA

for contributions to high-power microwave and millimeter-wave amplifiers enabled by composite dielectric materials
2018 Newly Elevated Fellows

Linda Camp
Indiana State University
Bloomington, IN, USA

_for research in human-centered risk and security_

Mark Campbell
Cornell University
Ithaca, NY, USA

_for contributions to control and estimation theory for autonomous systems_

Gustau Camps-Valls
Universitat de Valencia
Valencia, Spain

_for contributions to machine learning in remote sensing_

Emmanuel Candès
Stanford University
Stanford, CA, USA

_for contributions to sparse and low-rank signal and image processing_

Leo Casey
San Francisco, CA, USA

_for contributions to high-speed power electronic interfaces for grid-tied distributed resources_

Sherman Chan
Aspen Incorporated
San Mateo, CA, USA

_for contributions to power system modeling and analysis tools for protective relaying_

Chip Hong Chang
Nanyang Technical University
Singapore, Singapore

_for contributions to hardware security_
2018 Newly Elevated Fellows

Kun-Yung Chang
Los Altos Hills, CA, USA

for contributions to transceivers for high-performance networking and high-density memories

Ni-Bin Chang
University of Central Florida
Orlando, FL, USA

for contributions to computational techniques for the analysis of environmental sustainability

Tsung-Yung Chang
Taiwan Semiconductor Manufacturing Company
Hsinchu, Taiwan

for application of SRAM technology to low-power and high-performance computing

Kuan-Neng Chen
National Chiao Tung University
Hsinchu, Taiwan

for contributions to 3D integrated circuit and packaging technologies

Wen-Hua Chen
Loughborough University
Loughborough, UK

for contributions to the applications of nonlinear disturbance observer based control

Yi-Jan Emery Chen
National Taiwan University
Taipei, Taiwan

for contributions to monolithic RF CMOS power amplifiers and transceiver frontends

Yiran Chen
Pittsburgh, PA, USA

for contributions to spintronic memory

Po-Tai Cheng
National Tsing Hua University
Hsinchu, Taiwan

for contributions to power converters for microgrid applications
2018 Newly Elevated Fellows

Richard Chernock
Triveni Digital
Princeton, NJ, USA

for leadership in next generation digital TV

Yiu-Ming Cheung
Hong Kong Baptist University
Kowloon, Hong Kong

for contributions to cluster analysis and visual computing

Carla Chiasserini
Politecnico di Torino
Torino, Italy

for contributions to energy efficiency and cooperation in wireless networks

Gianfranco Chicco
Politecnico di Torino
Torino, Italy

for contributions to data analytics for smart metering

Gary Christensen
University of Iowa
Iowa City, IA, USA

for contributions to medical image registration and analysis

Oscar Cordon
University of Granada
Granada, Spain

for contributions to genetic and evolutionary fuzzy systems

Thomas Coughlin
San Jose, CA, USA

for leadership in consumer electronics digital storage technology
2018 Newly Elevated Fellows

Jian Dai
King's College of London
London, UK

for contributions to reconfigurable and metamorphic mechanisms

Swaroop Darbha
Texas A&M University
College Station, TX, USA

for contributions to intelligent transportation systems and autonomous vehicles

Ewa Deelman
University of Southern California
Marina Del Rey, CA, USA

for contributions to scientific workflow management

Andreas Demosthenous
University College London
London, UK

for contributions to integrated circuits for active medical devices

Jaydev Desai
Georgia Institute of Technology
Atlanta, GA, USA

for contributions to medical and swarm robotics

Po Dong
Nokia Bell Labs
Holmdel, NJ, USA

for contributions to silicon-based photonic devices and integrated circuits

Qian Du
Mississippi State University
Mississippi State, MS, USA

for contributions to hyperspectral data processing
2018 Newly Elevated Fellows

Alan Edelman
Massachusetts Institute of Technology
Cambridge, MA, USA

for contributions to the development of technical-computing languages

Lieven Eeckhout
Ghent University
Gent, Belgium

for contributions in computer architecture performance analysis and modeling

Karen Egiazarian
Tampere University of Technology
Tampere, Finland

for contributions to image and video denoising and restoration

Daniel Ellis
Columbia University
New York, NY, USA

for contributions to speech, audio, and music processing

Ehab El-Saadany
University of Waterloo
Waterloo, ON, Canada

for contributions to distributed generation planning, operation and control

Fariba Fahroo
Defense Advanced Research Projects Agency
Arlington, VA, USA

for contributions to computational optimal control theory

Liping Fang
Ryerson University
Toronto, ON, Canada

for contributions to multiple participant-multiple objective decision making and decision support systems
2018 Newly Elevated Fellows

Hany Farid
Dartmouth College
Hanover, NH, USA

*for contributions to digital forensics*

Dario Farina
University Medical Center Göttingen
Göttingen, Germany

*for contributions to neuromuscular electrophysiology and neurorehabilitation*

Steven Feiner
Columbia University
New York, NY, USA

*for contributions to augmented reality and computer graphics*

James Feltes
Siemens Power Technologies
Schenectady, NY, USA

*for contributions to modelling the dynamic response of power generation systems*

Massimo Franceschetti
University of California-San Diego
La Jolla, CA, USA

*for contributions to random wireless networks*

James Friend
University of California-San Diego
La Jolla, CA, USA

*for contributions to acoustics, microfluidics and microactuation*

Pascal Frossard
EPFL-École polytechnique fédérale de Lausanne
Lausanne, Switzerland

*for contributions to adaptive image and video representation, coding and communication*
2018 Newly Elevated Fellows

Kevin Fu
University of Michigan
Ann Arbor, MI, USA

for contributions to embedded and medical device security

Akira Fujiwara
NTT Basic Research Laboratories
Atsugi, Japan

for contributions to silicon single-electron devices

Thomas Furness
University of Washington
Seattle, WA, USA

for leadership in virtual and augmented reality

Andrea Galtarossa
Università degli Studi di Padova
Padova, Italy

for contributions to low polarization mode dispersion fibers

Dave Garrett
Tustin, CA, USA

for contributions to beam-forming architectures and implementations

Alexander Gelman
NETovations, LLC
Princeton, NJ, USA

for contributions to technologies for streaming and controlling digital video

Mounir Ghogho
Université Internationale de Rabat
Rabat, Morocco

for contributions to synchronization algorithms for communication systems
2018 Newly Elevated Fellows

Maria Gini
University of Minnesota - Twin Cities
Minneapolis, MN, USA

for contributions to multi-agent programming in robotics

Yihong Gong
Xi'an Jiaotong University
Xi'an City, China

for contributions to pattern recognition and multimedia content analysis

Stefano Grivet-Talocia
Politecnico Di Torino
Torino, Italy

for contributions to passive macromodeling for signal and power integrity

Cuntai Guan
Nanyang Technological University
Singapore, Singapore

for contributions to brain-computer interfaces and applications

Xinping Guan
Shanghai Jiao Tong University
Shanghai, China

for contributions to stability analysis for time-delay fuzzy systems and intelligent control of nonlinear systems

Minyi Guo
Shanghai Jiao Tong University
Shanghai, China

for contributions to performance optimization and resource management of parallel and distributed systems

Yongxin Guo
National University of Singapore
Singapore, Singapore

for contributions to wideband printed antennas
2018 Newly Elevated Fellows

Jung-Ik Ha
Seoul National University
Seoul, Korea

*for contribution to sensorless control of AC drives*

Martin Haardt
Ilmenau University of Technology
Ilmenau, Germany

*for contributions to multi-user MIMO communications and tensor-based signal processing*

Harald Haas
University of Edinburgh
Edinburgh, UK

*for leadership in the design of visible-light and wireless communication systems*

Hashem Hashemian
Analysis and Measurement Services Corp.
Knoxville, TN, USA

*for leadership in developing technologies for nuclear reactor monitoring*

Haibo He
University of Rhode Island
Kingston, RI, USA

*for contributions to adaptive learning*

Tian He
University of Minnesota - Twin Cities
Minneapolis, MN, USA

*for development and optimization of networked sensing systems*

Jeffrey Herd
MIT Lincoln Laboratory
Lexington, MA, USA

*for leadership in the development of low-cost phased array technology*
2018 Newly Elevated Fellows

Yoshihito Hirano
Mitsubishi Electric Corporation
Tokyo, Japan

for leadership in the development of 1.5-micron wind sensing lidar

Michel Houssa
University of Leuven
Leuven, Belgium

for contributions to materials characterization for advanced MOSFETs

Naira Hovakimyan
University of Illinois at Urbana-Champaign
Urbana, IL, USA

for contributions to control with applications to aerospace and robotic systems

Jonathan How
Massachusetts Institute of Technology
Cambridge, MA, USA

for contributions to guidance and control of air and space vehicles

David Howe
US National Institute of Standards & Technology
Boulder, CO, USA

for contributions to global time synchronization

David Hsu
National University of Singapore
Singapore, Singapore

for contributions to robot motion planning

Biao Huang
University of Alberta
Edmonton, AB, Canada

for contributions to and application of Bayesian soft-sensing for control performance monitoring
2018 Newly Elevated Fellows

Qingming Huang
University of Chinese Academy of Sciences
Beijing, China

for contributions to multimedia content analysis and visual perceptual processing

Pan Hui
University of Helsinki
Hong Kong University of Science & Technology
Clear Water Bay, Hong Kong

for contributions to social-based opportunistic networks

Brad Hutchings
Brigham Young University-Provo
Provo, UT, USA

for contributions to CAD tools for reconfigurable computing

Jaroslav Hynecek
Allen, TX, USA

for contributions to solid-state image sensors

Kullervo Hynynen
Imaging Research
Toronto, ON, Canada

for contributions to image-guided therapeutic focused ultrasound

Leon Iasemidis
Louisiana Technical University
Ruston, LA, USA

for developments in epileptic seizure prediction and closed-loop brain stimulation

Anil Jampala
Alstom Grid, Inc.
Redmond, WA, USA

for contributions to the utilization of synchrophasors in energy management systems
2018 Newly Elevated Fellows

Somesh Jha
University of Wisconsin-Madison
Madison, WI, USA

_for contributions to the application of formal methods to security_

Jiaya Jia
Chinese University of Hong Kong
Shatin NT, Hong Kong

_for contributions to deblurring techniques in computational photography_

Lynette Jones
Massachusetts Institute of Technology
Cambridge, MA, USA

_for contributions to tactile and thermal displays_

Sergei Kalinin
Oak Ridge National Laboratory
Oak Ridge, TN, USA

_for leadership in piezoresponse force microscopy for nanoscale imaging_

George Karypis
University of Minnesota-Twin Cities
Minneapolis, MN, USA

_for contributions to graph partitioning and data mining_

Aleksandar Kavcic
University of Hawaii
Honolulu, HI, USA

_for contributions to signal processing and coding in data storage_

Noriko Kawakami
Toshiba Mitsubishi-Electric Industrial Systems Corp.
Tokyo, Japan

_for contributions to large-capacity power converters and applications_
2018 Newly Elevated Fellows

Thomas Kazior
Raytheon: Radio Frequency Components
Andover, MA, USA

_for leadership in microwave and millimeter wave compound semiconductor technology and heterogeneous integration with silicon_

Angelos Keromytis
Defense Advanced Research Projects Agency (DARPA)
Arlington, VA, USA

_for contributions to network security systems_

Sung Kim
Seoul National University
Seoul, Korea

_for contributions to the design of microfabricated neural prosthetic devices_

Brian E.D. Kingsbury
IBM T. J. Watson Research Center
Yorktown Heights, NY, USA

_for contributions to acoustic models for automatic speech recognition_

Roberta Klatzky
Carnegie Mellon University
Pittsburgh, PA, USA

_for contributions to human visual, auditory, and haptic perception in robotics and virtual environments_

Lang Klaus
Fraunhofer Institute for Reliability and Microintegration IZM
Berlin, Germany

_for leadership in heterogeneous integration and microelectronic packaging_

Xenofon Koutsoukos
Vanderbilt University
Nashville, TN, USA

_for contributions to design of resilient cyber-physical systems_
2018 Newly Elevated Fellows

Michael Krames
Philips Lumileds Lighting Company
San Jose, CA, USA

for leadership in GaN-based light-emitting device physics and its commercialization

D. Richard Kuhn
US National Institute of Standards & Technology
Boulder, CO, USA

for contributions to access control and combinatorial test methods

Ajay Kumar
Hong Kong Polytechnic University
Kowloon, Hong Kong

for contributions to non-contact hand-based biometrics recognition

Isaac Lagnado
San Diego, CA, USA

for leadership in the development of silicon-on-sapphire technology

Pablo Laguna Lasosa
University of Zaragoza
Zaragoza, Spain

for contributions to cardiac biomedical signal processing

Susan Land
US Department of Defense
Madison, AL, USA

for leadership in software product development

Jungwon Lee
Samsung Semiconductor Inc.
San Diego, CA, USA

for contributions to signal processing for cellular modems
2018 Newly Elevated Fellows

Riccardo Leonardi
University of Brescia
Brescia, Italy

*for contributions to image and video compression and multimedia semantic content analysis*

Hui Li
Florida State University
Tallahassee, FL, USA

*for contributions to bidirectional converters for utility applications and high efficiency photovoltaic converters*

Qun Li
College of William & Mary
Williamsburg, VA, USA

*for contributions to ad-hoc network routing and sensor networks*

Tao Li
University of Florida
Gainesville, FL, USA

*for contributions to sustainable and power-efficient computer architectures*

Zhuo Li
Cadence Design Systems, Inc.
Austin, TX, USA

*for contributions to physical synthesis and modeling of integrated circuits*

Ben Liang
University of Toronto
Toronto, ON, Canada

*for contributions to mobility modeling and resource management in wireless networks*

Jiao Li-cheng
Xidian University
Xian, China

*for contributions to artificial neural networks and evolutionary computation*
2018 Newly Elevated Fellows

Chia-Wen Lin
National Tsing Hua University
Hsinchu, Taiwan

for contributions to multimedia coding and editing

Wei Lin
Case Western Reserve University
Cleveland, OH, USA

for contributions to nonlinear control systems

Zhouchen Lin
Peking University
Beijing, China

for contributions to low-rank data modeling and image processing

Giuseppe Lipari
University of Lille
Lille, France

for contributions to reservation-based real-time scheduling

Chee Wee Liu
National Taiwan University
Taipei, Taiwan

for contributions to high-mobility germanium and silicon-germanium MOSFETs

Jie Liu
Microsoft Research
Redmond, WA, USA

for contributions to wireless sensing

Ming Liu
Institute of Microelectronics of Chinese Academy of Sciences
Beijing, China

for contributions to the development of resistive non-volatile memories
2018 Newly Elevated Fellows

Shengyi Liu
The Boeing Company
Seattle, WA, USA

for application of multifunctional power conversion and power source integration to aircraft

Guo-Quan Lu
Virginia Tech
Blacksburg, VA, USA

for development of materials and packaging technologies for power electronics modules

Jie Lu
University of Technology Sydney
Sydney, NSW, Australia

for contributions to fuzzy machine learning and decision support systems

Wei Lu
University of Michigan
Ann Arbor, MI, USA

for contributions to development of neuromorphic systems

Yilong Lu
Nanyang Tech University
Singapore, Singapore

for contributions to array antenna techniques in radar systems

John Luginsland
Air Force Office of Scientific Research
Arlington, VA, USA

for contributions to space-charge limited flow physics, coherent radiation sources, and computational plasma physics

Richard Lukaszewski
Rockwell Automation
Mequon, WI, USA

for contributions to the application of power electronic devices for variable frequency drives
2018 Newly Elevated Fellows

Xiaobing Luo
Huazhong University of Science & Technology
Wuhan, China

for contributions to packaging of optoelectronic devices

Shugen Ma
Ritsumeikan University
Kusatsu-Shi, Japan

for contributions to the design and control of environment-adaptive robots

Zhenqiang Ma
University of Wisconsin-Madison
Madison, WI, USA

for contributions to flexible and biodegradable microwave electronics

Udaya Madawala
University of Auckland
Auckland, New Zealand

for contributions to power electronics for bi-directional wireless power transfer

Guoqiang Mao
University of Technology Sydney
Sydney, NSW, Australia

for contributions to localization algorithms for wireless networks

Vladimir Marik
Czech Institute of Informatics
Prague, Czech Republic

for leadership in industrial applications of cybernetics

Sonia Martinez
University of California-San Diego
La Jolla, CA, USA

for contributions to the geometric mechanics and control
2018 Newly Elevated Fellows

Saverio Mascolo
Politecnico di Bari
Bari, Italy

for contributions to modeling and control of congestion in packet networks

Andrea Massa
University of Trento
Trento, Italy

for contributions to phased arrays and electromagnetic inverse scattering

Sanu Mathew
Intel Corporation
Hillsboro, OR, USA

for leadership in computer arithmetic datapath and security circuits

Earl McCune
RF Communications Consulting
Santa Clara, CA, USA

for leadership in polar modulation circuits and signals

Paul Meaney
Thayer School of Engineering at Dartmouth
Hanover, NH, USA

for contributions to microwave tomography and its translation to clinical use

Deepankar Medhi
University of Missouri-Kansas City
Kansas City, MO, USA

for contributions to optimization and the design of computer-communication networks

Russell Meier
Milwaukee School of Engineering
Milwaukee, WI, USA

for contributions to global on-line engineering education
2018 Newly Elevated Fellows

Tommaso Melodia
Northeastern University
Boston, MA, USA

_for contributions to underwater acoustic and multimedia networks_

Abraham Mendelson
Technion-Israel Institute of Technology
Haifa, Israel

_for contributions to power-aware architecture and value prediction for program execution_

Olgica Milenkovic
University of Illinois at Urbana-Champaign
Urbana, IL, USA

_for contributions to genomic data compression_

Jelena Misic
Ryerson University
Toronto, ON, Canada

_for contributions to modeling and performance evaluation in wireless communications_

Andrea Montanari
Stanford University
Stanford, CA, USA

_for applications of statistical physics to coding theory_

Mehul Motani
National University of Singapore
Singapore, Singapore

_for contributions to wireless communications and sensor networks_

Hideki Motoyama
Central Research Institute of Electric Power Industry Corporation
Yokosuka, Japan

_for contributions to lightning protection and insulation coordination of electric power systems_
2018 Newly Elevated Fellows

Saibal Mukhopadhyay
Georgia Institute of Technology
Atlanta, GA, USA

*for contributions to energy-efficient and robust computing systems design*

Chandra Nair
Chinese University of Hong Kong
Shatin NT, Hong Kong

*for contributions to network information theory*

Girish Nair
University of Melbourne
Victoria, Australia

*for contributions to control and information in networked dynamical systems*

Hans Peter Nee
KTH Royal Institute of Technology
Stockholm, Sweden

*for contributions to silicon carbide power electronics and modular multilevel converters*

Silviu-Iulian Niculescu
Centre National de la Recherche Scientifique
Paris, France

*for research on the effects of delays in system dynamics*

Konstantina Nikita
National Technical University of Athens
Athens, Greece

*for contributions to bioelectromagnetics and implantable antennas for medical applications*

Barbara Oakley
Oakland University
Rochester, MI, USA

*for outreach through online engineering pedagogy*
2018 Newly Elevated Fellows

Hideo Ohno
Tohoku University
Sendai, Japan

for contributions to materials and device design for spintronics

Yew-Soon Ong
Nanyang Technological University
Singapore, Singapore

for contributions to memetic computation and applications

Hidetoshi Onodera
Kyoto University
Kyoto, Japan

for contributions to variation-aware design and analysis of integrated circuits

Javier Ortega-Garcia
Universidad Autonoma de Madrid
Madrid, Spain

for contributions to biometrics for forensic speaker verification and signature recognition

Lawrence Ozaro
Nokia- Bell Labs
New Providence, NJ, USA

for contributions to capacity characterization of fading and feedback channels

Hitay Ozbay
Bilkent University
Bilkent, Turkey

for contributions to robust control for infinite dimensional systems

Philippe Paillet
University of Montpellier-CEA
Paris, France

for contributions to the understanding of radiation effects in electronics
2018 Newly Elevated Fellows

Patrick Panciatici  
Réseau de Transport d'Électricité  
Paris, France  

*for contributions to power systems analysis software*

Stefan Parkvall  
Ericsson AB  
Stockholm, Sweden  

*for contributions to cellular standards*

Jignesh Patel  
University of Wisconsin  
Madison, WI, USA  

*for contributions to high-performance spatial data analysis methods*

Constantinos S. Pattichis  
University of Cyprus  
Nicosia, Cyprus  

*for contributions to medical diagnostic and mobile health systems*

Shanthi Pavan  
Indian Institute of Technology  
Chennai, India  

*for contributions to delta sigma modulators and analog filters*

George Pavlou  
University College London  
London, UK  

*for contributions to resource management and content-based networking*

Joseph Pawlowski  
Micron Technology, Inc.  
Boise, ID, USA  

*for contributions to memory system interfaces*
2018 Newly Elevated Fellows

Peter Perkins
Tigard, OR, USA

*for contributions to touch current measurement and electric shock protection*

Alexei Pilipetskii
Tyco Telecommunications
Eatontown, NJ, USA

*for contributions to transoceanic fiber-optic transmission systems*

Josien Pluim
Eindhoven University of Technology
Eindhoven, Netherlands

*for contributions to medical image analysis*

Massimo Poncino
Politecnico Di Torino
Torino, Italy

*for contributions to low-power circuits and systems*

John Potter
Centre for Maritime Research and Experimentation (CMRE)
La Spezia, Italy

*for contributions to ice-ocean interaction, oceanography, and underwater communication*

Paras Prasad
State University of New York at Buffalo
Buffalo, NY, USA

*for contributions in biophotonics, nanophotonics and novel biomedical technology*

Konstantinos Psounis
University of Southern California
Los Angeles, CA, USA

*for contributions to multi-hop wireless networks*
Hairong Qi
University of Tennessee
Knoxville, TN, USA

for contributions to collaborative signal processing in sensor networks

Jianmin Qu
Tufts University
Medford, MA, USA

for contributions to design and reliability analysis for microelectronic packaging

Ronghai Qu
Huazhong University of Science & Technology
Wuhan, China

for contributions to flux modulations machines and wind generators

Tony Quek
Singapore University of Technology
Singapore, Singapore

for contributions to heterogeneous and wireless networks

CJ. Reddy
Altair Engineering Inc.
Hampton, VA, USA

for leadership in simulation methods for antenna placement and co-site analysis

Jennifer Rexford
Princeton University
Princeton, NJ, USA

for contributions to network management and associated routing systems

Brian Rigling
Wright State University
Dayton, OH, USA

for contributions to synthetic aperture radar imaging
2018 Newly Elevated Fellows

Michael Riley
New York, NY, USA

_for contributions to automatic speech recognition using Weighted Finite-State Transducers_

Kim Roberts
Ciena Corporation
New York, NY, USA

_for contributions to digital signal processing for coherent optical communication systems_

Justin Romberg
Georgia Tech
Atlanta, GA, USA

_for contributions to compressive sensing_

Luca Roselli
University of Perugia
Perugia, Italy

_for contributions to sustainable radio-frequency modules for wireless sensor networks_

Tajana Rosing
University of California, San Diego
La Jolla, CA, USA

_for contributions to power and reliability management of Systems-on-Chip_

Eugeniusz Rosolowski
Wroclaw University of Technology
Wroclaw, Poland

_for contributions to education in power system modeling and protection_

Badrinath Roysam
University of Houston
Houston, TX, USA

_for contributions to image processing algorithms for biological microscopy_
2018 Newly Elevated Fellows

Karen Rudie
Queens University
Kingston, ON, Canada

for contributions to the supervisory control theory of discrete event systems

Kazuhiro Saitou
University of Michigan
Ann Arbor, MI, USA

for contributions in computational assembly and disassembly design of mechanical products

Seiji Samukawa
Tohoku University
Sendai, Japan

for contributions to damage-free plasma processing for nano-device manufacturing

Kevin Sangston
Georgia Tech Research Institute
Atlanta, GA, USA

for contributions to coherent detection of radar signals in clutter

Venkateswara Anand Sankaran
Ford Motor Company
Dearborn, MI, USA

for leadership in power electronics and energy storage for electric vehicles

Rahul Sarpeshkar
Thayer School of Engineering at Dartmouth
Hanover, NH, USA

for contributions to ultra low-power biomedical electronics

Ronan Sauleau
Universite de Rennes
Rennes, France

for contributions to lens and millimeter wave antennas
2018 Newly Elevated Fellows

Hiroshi Sawada
NTT Communication Science Laboratories
Nara, Japan

for contributions to blind source separation of speech and audio signals

Dieter Scherer
Palo Alto, CA, USA

for contributions to the design of oscillators and synthesized signal sources

Alex Schneider
Glen Ellyn, IL, USA

for contribution to transmission and generation failure modeling

Clint Schow
University of California Santa Barbara
Santa Barbara, CA, USA

for contributions to high bandwidth optical interconnects

Bjoern Schuller
University of Passau
Passau, Germany

for contributions to computer audition

Assaf Schuster
Technion – Israel Institute of Technology
Haifa, Israel

for contributions to cloud computing

Andrew Senior
London, UK

for contributions to pattern recognition in speech, computer vision, and biometrics
2018 Newly Elevated Fellows

Sanjit Seshia
University of California- Berkeley
Berkeley, CA, USA

for contributions to formal methods for inductive synthesis and algorithmic verification

Shihab Shamma
University of Maryland- College Park
College Park, MD, USA

for applications of signal processing to auditory neuroscience

Dinggang Shen
University of North Carolina-Chapel Hill
Chapel Hill, NC, USA

for contributions to medical image analysis

Riichiro Shirota
National Chao-Tung University
Hsinchu, Taiwan

for contributions to the development of NAND flash memory

Jiwu Shu
Tsinghua University
Beijing, China

for contributions to dependable, high-performance storage systems architecture

Hava Siegelmann
University of Massachusetts
Amherst, MA, USA

for contributions to neural computation

Lowell Smith
Ge Global Research
Niskayuna, NY, USA

for contributions to ultrasound transducer technology for medical imaging
2018 Newly Elevated Fellows

Gregory Snider
University of Notre Dame
Notre Dame, IN, USA

for contributions to single electron based computing technology

Yan Solihin
North Carolina State University
Raleigh, NC, USA

for contributions to shared cache hierarchies and secure processors

Min Song
Michigan Technological University
Houghton, MI, USA

for leadership in supporting wireless networking and radio spectrum access

Miguel Angel Sotelo Vazquez
Universidad de Alcala
Madrid, Spain

for contributions to intelligent vehicles for road infrastructure inspection

Siddhartha Srinivasa
Carnegie Mellon University
Pittsburgh, PA, USA

for contributions to robotic manipulation and human-robot interaction

Salvatore Stolfo
Columbia University
New York, NY, USA

for contributions to machine learning-based computer security

Peter Stone
University of Texas- Austin
Austin, TX, USA

for contributions to reinforcement learning, multiagent systems, and robotics
2018 Newly Elevated Fellows

David Stork
Rambus
Sunnyvale, CA, USA

for contributions to pattern recognition and image analysis

Weifeng Su
State University of New York at Buffalo
Buffalo, NY, USA

for contributions to multi-input multi-output wireless communications and cooperative networks

Rahul Sukthankar
Google, Inc.
Mountain View, CA, USA

for contributions to video understanding

Hong-Bo Sun
Jilin University
Jilin, China

for contributions to laser nanofabrication and ultrafast spectroscopy

Hongbin Sun
Tsinghua University
Beijing, China

for contributions to algorithms and technologies for energy management systems

Shuji Tanaka
Tohoku University
Sendai, Japan

for contributions to micro-electromechanical systems for acoustic wave devices, physical sensors, and power generation

Mark Tehranipoor
University of Florida
Gainesville, FL, USA

for contributions to integrated circuits security and trust
2018 Newly Elevated Fellows

Juergen Teich
University of Erlangen-Nuremberg
Erlangen, Germany

for contributions to hardware/software co-design for embedded systems

Marina Thottan
Nokia- Bell Labs
New Providence, NJ, USA

for leadership in high-speed internet-protocol networks

Yingli Tian
City College of NY-SUNY
New York, NY, USA

for contributions to automatic facial expression analysis and human activity understanding

Jocelyne Troccaz
TIMC-IMAG Laboratory
La Tronche Cedex, France

for contributions to robotics and imaging for medical applications

John Tsotsos
York University
Toronto, ON, Canada

for contributions to active vision and computational models of visual attention

Marcelo Valdes
GE Industrial Solutions
Cary, NC, USA

for contributions to improving the safety and reliability of low voltage power systems

Matthew Valenti
West Virginia University
Morgantown, WV, USA

for contributions to cooperative diversity and development of distributed turbo codes
2018 Newly Elevated Fellows

Victor Veliadis
PowerAmerica
Raleigh, NC, USA

*for contributions to development of silicon carbide power devices*

Giovanni Vigna
University of California- Santa Barbara
Santa Barbara, CA, USA

*for contributions to Internet security and cybercrime prevention*

Sergiy Vorobyov
Aalto University
Espoo, Finland

*for contributions to optimization in robust signal processing*

Haixun Wang
Google Research
Palo Alto, CA, USA

*for contributions to knowledge bases for text understanding*

Li-C Wang
University of California- Santa Barbara
Santa Barbara, CA, USA

*for contributions to statistical timing analysis for integrated circuits*

Peng Wang
Nanyang Technological University
Singapore, Singapore

*for contributions to power system reliability and hybrid AC/DC micro-grids*

Xudong Wang
Shanghai Jiao Tong University
Shanghai, China

*for contributions to wireless mesh networks*
2018 Newly Elevated Fellows

Yu Wang
University of North Carolina-Charlotte
Charlotte, NC, USA

for contributions to topology design and performance optimization in wireless networks

Robert Weikle
University of Virginia-Charlottesville
Charlottesville, VA, USA

for contributions to millimeter-wave and submillimeter-wave electronics and instrumentation for terahertz frequencies

Daniel Weile
University of Delaware
Newark, DE, USA

for contributions to computational electromagnetics

Mark Weiss
Florida International University
Miami, FL, USA

for advancements in computer science education

Stephen Welby
US Department of Defense
Washington, DC, USA

for leadership in defense and aerospace systems engineering

Thomas Weller
University of South Florida
Tampa, FL, USA

for contributions to modeling and design of passive microwave circuits and components

Qihao Weng
Indiana State University
Terre Haute, IN, USA

for contributions to urban remote sensing
2018 Newly Elevated Fellows

David Whelan
University of California, San Diego
La Jolla, CA, USA

for leadership in space-based navigation, synchronization, and surveillance

Jean-Pierre Wigneron
Université de Bordeaux
Villenave d'Ornon, France

for contributions to surface modeling in passive microwave remote sensing

James Wilkinson
University of Southampton
Southampton, UK

for contributions to integrated photonics

Laurie Williams
North Carolina State University
Raleigh, NC, USA

for contributions to reliable and secure software engineering

Stefan Winkler
Singapore, Singapore

for contributions to perceptual video quality measurement

Philip Winston
Southern Company
Atlanta, GA, USA

for development of standards in power system protection reliability

Stephen T. Wong
Houston Methodist Hospital
Houston, TX, USA

for leadership in drug discovery, systems biology, bioinformatics, and health analytics
2018 Newly Elevated Fellows

Rebecca Wright
Rutgers, The State University of New Jersey
Piscataway, NJ, USA

for contributions to applied cryptography and privacy

Shien-Yang Wu
Taiwan Semiconductor Manufacturing Company, Limited
Hsinchu, Taiwan

for leadership in CMOS process integration

Huikai Xie
University of Florida
Gainesville, FL, USA

for contributions to micro-electromechanical optical scanning systems

Tao Xie
University of Illinois at Urbana–Champaign
Urbana, IL, USA

for contributions to software testing and analytics

Hao Xin
University of Arizona
Tucson, AZ, USA

for contributions to electromagnetic metamaterials and 3D printing of metamaterial structures

Dong Xu
University of Sydney
Sydney, NSW, Australia

for contributions to recognition and retrieval of multimedia and biometric data

Jianbin Xu
Chinese University of Hong Kong
Shatin NT, Hong Kong

for contributions to nanoscale electronic materials and devices
2018 Newly Elevated Fellows

Yang Yang
Shanghai Institute of Microsystem and Information Technology (SIMIT)
Shanghai, China

for contributions and leadership in wireless access and networking

Anthony Yen
ASML
San Jose, CA, USA

for leadership in extreme-ultraviolet lithography for high volume manufacture of integrated circuits

Dong Yu
Bothell, WA, USA

for contributions to context-dependent automatic speech recognition

Richard Yu
Carleton University
Ottawa, ON, Canada

for contributions to mobility management and radio resource allocation in mobile wireless networks

Habib Zaidi
Geneva University Hospital
Geneva, Switzerland

for contributions to quantitative multimodality molecular imaging

Changshui Zhang
Tshinghua University
Beijing, China

for contributions to semi-supervised learning for signal processing

Lei Zhang
Hong Kong Polytechnic University
Hong Kong, China

for contributions to sparsity-based image modeling and perceptual image quality assessment
2018 Newly Elevated Fellows

Yanyong Zhang
Rutgers, The State University of New Jersey
New Brunswick, NJ, USA

for contributions to robust and efficient large-scale sensor networks

Zhensheng Zhang
Livermore, CA, USA

for contributions to wireless ad-hoc and optical networks

Zhengming Zhao
Tsinghua University
Beijing, China

for contributions to electromagnetic transient analysis and control of high-voltage high-power electronics conversion

Tong Zhou
Tsinghua University
Beijing, China

for contributions to robust identification and estimation of control systems

Xiaofang Zhou
University Of Queensland
Queensland, Australia

for advancements in database query processing

Peiying Zhu
Huawei Technologies Canada
Ottawa, ON, Canada

for leadership in wireless communications systems

Thomas Zwick
Karlsruhe Institute of Technology
Karlsruhe, Germany

for contributions to millimeter wave transceivers