

2014 Newly Elevated Fellows

Amr El Abbadi
University of California-Santa Barbara
Santa Barbara, CA, USA

for contributions to the design of fault-tolerant large-scale data management systems

Brice Achkir
Cisco Systems, Inc.
San Jose, CA, USA

for contributions to diagnostics of physical layer design in gigabit digital transmission systems

Thomas Ainsworth
US Naval Research Laboratory
Washington, DC, USA

for contributions to the interpretation and analysis of polarimetric SAR imagery

Mohammad Alam
University of South Alabama
Mobile, AL, USA

for contributions to pattern recognition and high resolution image reconstruction

Kevin Almeroth
University of California-Santa Barbara
Santa Barbara, CA, USA

for contributions to multicast communication, wireless networks, and educational technology

Gustavo Alonso
ETH Zurich
Zurich, Switzerland

for contributions to data management and distributed systems

2014 Newly Elevated Fellows

Andrea Alu
University of Texas at Austin
Austin, TX, USA

for contributions to the theory and applications of electromagnetic metamaterials and plasmonic phenomena

Bjarne Andersen
Andersen Power Electronic Solutions Ltd.
East Sussex, UK

for leadership in High Voltage DC Transmission Systems, AC Power Electronics, and Reactive Power Compensation

Bertram Arbesser-Rastburg
European Space Agency (ESA)
Noordwijk, The Netherlands

for leadership in satellite communications, navigation, and remote sensing

Seiichi Aritome
SK Hynix Inc.
Gyeonggi-do, South Korea

for contributions to flash memory technologies

Robert Arno
ITT Exelis Advanced Information Systems
Rome, NY, USA

for contributions in applying stochastic modeling techniques to power distribution systems for critical facilities

Krste Asanovic
University of California-Berkeley
Berkeley, CA, USA

for contributions to computer architecture

2014 Newly Elevated Fellows

Phaedon Avouris
IBM Research
Yorktown Heights, NY, USA

for contributions to carbon electronics and photonics

Nader Bagherzadeh
University of California-Irvine
Irvine, CA, USA

for contributions to the design and analysis of coarse-grained reconfigurable processor architectures

Chandrajit Bajaj
University of Texas at Austin
Austin, TX, USA

for contributions to image processing, scientific visualization, and computational biology

Poras Balsara
University of Texas at Dallas
Dallas, TX, USA

for contributions to the design of all-digital frequency synthesis

Soumitro Banerjee
Indian Institute of Science,
Education & Research
Kolkata, West Bengal, India

for contributions to the understanding of nonlinear phenomena in power electronic circuits, and to the theory of border collision bifurcation

Matthew Barth
University of California-Riverside
Riverside, CA, USA

for pioneering research in intelligent transportation systems

2014 Newly Elevated Fellows

William Bartley
Newington, CT, USA

for contributions to the development of generator and transformer standards for life cycle planning and risk assessment

Evert Basch
Verizon, Inc.
Waltham, MA, USA

for advancing the deployment of fiber-optic communication systems in carrier networks

Andrea Baschiroto
University of Milano-Bicocca
Milano, Italy

for contributions to analog filters

Elizabeth Belding
University of California-Santa Barbara
Santa Barbara, CA, USA

for contributions to mobile and wireless networking and communication protocols

Carl Benner
Texas Engineering Experiment Station
College Station, TX, USA

for contributions to development of waveform-based analytics for electric power distribution

Randall Berry
Northwestern University
Evanston, IL, USA

for contributions to resource allocation and interference management in wireless networks

2014 Newly Elevated Fellows

Nicola Bianchi
University of Padova
Padova, Italy

for contributions to the theory and practice of electric machine design and control

Gautam Biswas
Vanderbilt University
Nashville, TN, USA

for contributions to the modeling and simulation, diagnosis, and fault-adaptive control of complex dynamic systems

Igal Brener
Sandia National Laboratories
Albuquerque, NM, USA

for contributions to terahertz science and technology

Alberto Broggi
University of Parma
Parma, Italy

for contributions to the design of automated vehicles

Kent Brown
Tennessee Valley Authority
Ooltewah, TN, USA

for leadership in standards development for design, testing, and utilization of electrical equipment for the nuclear power industry

Richard Brown
University of Utah
Salt Lake City, UT, USA

for contributions to microsystem design

2014 Newly Elevated Fellows

Klaas Bult
Broadcom Corp.
Bunnik, The Netherlands

for contributions to the design of high frequency analog and mixed signal circuits

Martin Buss
Technische Universitaet Muenchen
Muenchen, Germany

for contributions to haptic telepresence systems and autonomous robots

Kathleen Carley
Carnegie Mellon University
Pittsburgh, PA, USA

for contributions to multi-dimensional human and cyber dynamic networks

Domenico Casadei
Bologna University
Bologna, Italy

for contributions to direct torque control and matrix converters in electric drives

Branko Celler
Commonwealth Industrial and
Scientific Research Organisation (CSIRO)
Epping, NSW, Australia

for contributions to telehealth services for the management of chronic disease

Babu Chalamala
MEMC Electronic Materials, Inc.
St. Peters, MO, USA

for contributions to the development of advanced materials and device technologies for vacuum microelectronics and field emission displays

2014 Newly Elevated Fellows

Ambrish Chandra
Ecole de Technologie Superieure
Montreal, QC, Canada

for contributions to power distribution and renewable energy systems

Edward Chang
National Chiao Tung University
Hsinchu, Taiwan

for contributions to compound semiconductor heterojunction transistor technologies

Shoou-Jinn Chang
National Cheng Kung University
Tainan, Taiwan

for contributions to nano scale photonic, electronic, and sensing devices

Danny Chen
University of Notre Dame
Notre Dame, IN, USA

for contributions to computation techniques for geometric optimization and medical applications

Jing Kevin Chen
Hong Kong University of Science and Technology
Hong Kong, China

for contributions to compound semiconductor heterojunction transistor technologies

Kwok Cheung
Alstom Grid
Redmond, WA, USA

*for development and implementation of energy and market management systems
for control centers*

2014 Newly Elevated Fellows

Tihao Chiang
Ambarella Taiwan Ltd.
Hsinchu, Taiwan

for contributions to the theory and applications of video coding algorithms

Dmitry Chizhik
Bell Labs
Holmdel, NJ, USA

for contributions to wireless channel modelling

Sunghyun Choi
Seoul National University
Seoul, Korea

for contributions to development of wireless LAN protocols

Hean Teik Chuah
Universiti Tunku Abdul Rahma, Malaysia
Selangor, Malaysia

for leadership in engineering education

Judson Clements
Appalachian State University
Boone, NC, USA

for contributions to the evaluation and elimination of electrostatic hazards

James Colgate
Northwestern University
Evanston, IL, USA

for contributions to the field of haptics

2014 Newly Elevated Fellows

Jorge Cortes
University of California-San Diego
La Jolla, CA, USA

for contributions to geometric control, nonsmooth dynamical systems, and distributed control of multi-agent systems

Jan Craninckx
Interuniversity Microelectronics Center (IMEC)
Leuven, Belgium

for contributions to the design of CMOS RF transceivers

Andres Cuevas
Australian National University
Canberra, ACT, Australia

for contributions to the science and technological development of silicon solar cells

Shuguang Cui
Texas A&M University
College Station, TX, USA

for contributions to cognitive communications and energy efficient system design

Steven Cundiff
JILA, NIST & University of Colorado
Boulder, CO, USA

for contributions to self-referenced optical frequency combs and ultrafast nonlinear solid-state spectroscopy

Michael Cuneo
Sandia National Laboratories
Albuquerque, NM, USA

for developments in inertial confinement fusion with magnetically-driven-implosions and electrode cleaning

2014 Newly Elevated Fellows

Anand Dabak
Texas Instruments
Dallas, TX, USA

for contributions to wireless and power-line communications

Manuel Dabreu
SanDisk Corp
EL Dorado Hills, CA, USA

for contributions to the design of resilient manufacturing processes for electronic products

Liyi Dai
US Army Research Office
Durham, NC, USA

for leadership and contributions to discrete event systems and singular systems

Hooman Darabi
Broadcom
Irvine, CA, USA

for contributions to radio frequency integrated circuits and systems

Christos Davatzikos
University of Pennsylvania
Philadelphia, PA, USA

for contributions to automatic analysis and interpretation of biomedical multi-dimensional data

Michael De Lisis
Wavestream Corp.
San Dimas, CA, USA

for leadership and commercialization of high power microwave and millimeter-wave technologies

2014 Newly Elevated Fellows

Tobias Delbruck
University of Zurich and ETH Zurich
Zurich, Switzerland

for contributions to neuromorphic visual sensors and processing

Sujit Dey
University of California-San Diego
La Jolla, CA, USA

for contributions to the design and testing of low-power systems and system-on-chips

Inderjit Dhillon
University of Texas at Austin
Austin, TX, USA

for contributions to large-scale data analysis and computational mathematics

Donald Disney
Avogy, Inc.
Cupertino, CA, USA

for contributions to power integrated circuits and energy efficiency applications

Rahul Dixit
Space & Airborne Systems
Raytheon Company
Redondo Beach, CA, USA

for leadership in microwave monolithic integrated circuits technologies and in active electronically steerable arrays application

Minh Do
University of Illinois at Urbana-Champaign
Urbana, IL, USA

for contributions to image representation and computational imaging

2014 Newly Elevated Fellows

David Doermann
University of Maryland- College Park
College Park, MD, USA

for contributions to research and development of automatic analysis and processing of document page imaging

Mischa Dohler
Centre for Telecommunications
Technologies of Catalonia (CTTC)
Barcelona, Spain

for contributions to wireless machine-to-machine communication systems

Peter Donalek
MWH Global
Chicago, IL, USA

for contributions to grid-connected pumped storage hydro systems

Joachim Ender
Fraunhofer Group
Wachtberg, Germany

for contributions to multi-channel synthetic aperture radar and radar array signal processing

Robert Ewing
Air Force Research Laboratory
Wright-Patterson AFB, OH, USA

for contributions to electronic system design in avionics

Paolo Faraboschi
Hewlett-Packard
Barcelona, Spain

for contributions to embedded processor architecture and system-on-chip technology

2014 Newly Elevated Fellows

Aly Farag
University of Louisville
Louisville, KY, USA

for contributions to image modeling and biomedical applications

Hector Fenech
Eutelsat SA
Paris, France

for leadership in the definition of telecommunications satellite architectures and systems through innovation and technological exploitation

Peter Fischer
Lawrence Berkeley National Laboratory (LBNL)
Berkeley, CA, USA

for contributions to the development and application of high resolution X-ray magnetic imaging

Franco Flaviis
University of California-Irvine
Irvine, CA, USA

for contributions to reconfigurable antennas and tunable dielectrics for wireless communication systems

Mahmud Fotuhi-Firuzabad
Sharif University of Technology
Tehran, Iran

for development of probabilistic techniques in power system reliability evaluation

Kim Fowler
Kansas State University
Manhattan, KS, USA

for contributions to mission-critical and safety-critical systems engineering

2014 Newly Elevated Fellows

Alejandro Frangi Caregnato
University of Sheffield
Sheffield, UK

for contributions to medical image analysis and image-based computational physiology

Ichiro Fujimori
Broadcom Corporation
Irvine, CA, USA

for contributions to oversampled data converters and gigabit wireline transceivers

Huijun Gao
Harbin Institute of Technology
Harbin, China

for contributions to the theory and industrial applications of networked control systems

Phillip Gibbons
Intel Labs
Pittsburgh, PA, USA

for contributions to parallel computing and databases

Garth Gibson
Carnegie Mellon University
Pittsburgh, PA, USA

for contributions to the performance and reliability of transformative storage systems

Robert Gilmore
QUALCOMM, Inc.
San Diego, CA, USA

for contributions to high-performance and low-power wireless portable communications devices

2014 Newly Elevated Fellows

James Glass
Massachusetts Institute of Technology (MIT)
Cambridge, MA, USA

for contributions to probabilistic segment-based speech recognition and spoken dialogue interfaces

Guang Gong
University of Waterloo
Waterloo, ON, Canada

for contributions to sequences and cryptography applied to communications and security

Antonio Gonzalez
Intel Labs Barcelona &
Universitat Politecnica de Catalunya
Barcelona, Spain

for contributions to the design of energy-efficient and resilient processor architectures

Ramesh Govindan
University of Southern California
Los Angeles, CA, USA

for contributions to computer networking applied to sensor networks

Vivek Goyal
Massachusetts Institute of Technology (MIT)
Cambridge, MA, USA

for contributions to information representations and their applications in acquisition, communication, and estimation

Helmut Graeb
Technische Universitaet Muenchen
Munich, Germany

for contributions to design centering and structural analysis of analog circuits

2014 Newly Elevated Fellows

Remi Gribonval
INRIA
Rennes Cedex, France

for contributions to the theory and applications of sparse signal processing

Sarath Gunapala
NASA Jet Propulsion Laboratory
California Institute of Technology
Pasadena, CA, USA

for contributions to infrared detectors and focal plane arrays

Yingjie Guo
Commonwealth Industrial and
Scientific Research Organisation (CSIRO)
Marsfield, NSW, Australia

for contributions to smart reconfigurable and high gain antennas for broadband wireless communications systems

Bruce Gurney
HGST, a subsidiary of Western Digital
San Jose, CA, USA

for contributions to spin valve Giant Magnetoresistance sensors for magnetic recording systems

Bjorn Gustavsen
Power Research Institute (SINTIFF)
Trondheim, Norway

for contributions to frequency-domain modeling techniques

Adolfo Guzman
Instituto Politecnico Nacional (IPN)
Mexico City, Mexico

for contributions to consistent labeling for 3-D object recognition

2014 Newly Elevated Fellows

Martin Haenggi
University of Notre Dame
Notre Dame, IN, USA

for contributions to the spatial modeling and analysis of wireless networks

Irena Hajnsek
Swiss Federal Institute of Technology (ETH) Zurich
and German Aerospace Center (DLR)
e.V. Microwaves & Radar Institute
Wessling, Germany

for contributions to synthetic aperture radar imaging using airborne sensors and satellite missions

Dilek Hakkani-Tur
Microsoft Research
Los Altos, CA, USA

for contributions to spoken language processing

Zhu Han
University of Houston
Houston, TX, USA

for contributions to resource allocation and security in wireless communications

Majeed Hayat
University of New Mexico
Albuquerque, NM, USA

for contributions to the modeling of impact ionization and noise in avalanche-photodiode devices

Yun He
Tsinghua University
Beijing, China

for contributions to video coding and communication technologies

2014 Newly Elevated Fellows

John Heidemann
USC/Information Sciences Institute
Marina del Rey, CA, USA

for contributions to sensor networks, internet measurement and simulation

Fred Heismann
JDS Uniphase Corp.
Colts Neck, NJ, USA

for contributions to understanding, control and mitigation of polarization effects in fiberoptic communication systems

Scott Hensley
Jet Propulsion Laboratory
Pasadena, CA, USA

for contributions to radar remote sensing of the Earth and planetary bodies and advancement of interferometric synthetic aperture radar

Peter Hoehner
University of Kiel
Kiel, Germany

for contributions to decoding and detection that include reliability information

Axel Hoffmann
Argonne National Laboratory
Argonne, IL, USA

for contributions to nanomagnetism and manipulation of spin current

Chris Horwill
Alstom Grid
Stafford, UK

for contributions to testing and commissioning of flexible AC transmission systems

2014 Newly Elevated Fellows

Yiwei Hou
Virginia Polytechnic Institute & State University
Blacksburg, VA, USA

for contributions to modeling and optimization of wireless networks

Hao Huang
GE Aviation
Troy, OH, USA

for contributions to electric power generation, conversion, and control in aircraft

Toshio Iguchi
National Institute of Information
and Communications Technology
Tokyo, Japan

for contributions to spaceborne meteorological instruments and radar

Ilko Ilev
U.S. Dept. of Food and Drug Administration
Silver Spring, MD, USA

for contributions to the development of multifunctional optical sensing and imaging methods in biophotonics technology and medical devices

Hisao Ishibuchi
Osaka Prefecture University
Osaka, Japan

for contributions to evolutionary multiobjective optimization and fuzzy rule-based classifier design

Kazunari Ishimaru
Memory Division, Toshiba Corporation
Semiconductor and Storage Products Company
Yokohama, Japan

for contributions to static random access memory and complementary metal-oxide semiconductor devices

2014 Newly Elevated Fellows

Cursino Jacobina
Federal University of Campina Grande/DEE
Campina Grande, Brazil

for contributions to the development of power converters and machine drives

Ali Jadbabaie
University of Pennsylvania
Philadelphia, PA, USA

for contributions to the theory of multi-agent coordination and control

Syed Jafar
University of California-Irvine
Irvine, CA, USA

for contributions to analyzing the capacity of wireless communication networks

Xicheng Jiang
Broadcom Corporation
Irvine, CA, USA

for development of communication systems-on-chip products

Weihua Jiang
Nagaoka University of Technology
Nagaoka, Japan

for contributions to repetitive pulsed power generation utilizing solid-state device technology

Christopher Johnson
University of Utah
Salt Lake City, UT, USA

for leadership in scientific computing and scientific visualization

2014 Newly Elevated Fellows

Gary Johnson
Mortar Net Solutions
Chicago, IL, USA

for leadership in growth and manufacturing processes of quartz

Mohan Kankanhalli
National University of Singapore
Singapore, Singapore

for contributions to multimedia content processing and security

Krishna Kant
George Mason University
Fairfax, VA, USA

for contributions to enterprise server performance, power management technologies and domain name system robustness

George Karagiannidis
Aristotle University of Thessaloniki
Thessaloniki, Greece

for contributions to the performance analysis of wireless communication systems

William Karl
Boston University
Boston, MA, USA

for contributions to statistical signal processing and image reconstruction

Tanay Karnik
Intel Corporation
Hillsboro, OR, USA

for contributions to error-tolerant circuits and near-load voltage regulators

2014 Newly Elevated Fellows

Ursula Keller
ETH Zurich
Zurich, Switzerland

for contributions to ultrashort pulse modelocked laser physics and technology

Roger King
Mississippi State University
Mississippi State University, MS, USA

for contributions to power systems data analytics to improve grid reliability

Michael King
University of Colorado
Boulder, CO, USA

for fundamental research in remote sensing of clouds and aerosols

Hassan Kojori
Honeywell
Toronto, ON, Canada

for contributions to the design and application of predictive and diagnostic algorithms in power electronics converters

Robert Kozma
University of Memphis
Memphis, TN, USA

for contributions to pattern-based computation based on large-scale networks and random graphs

Hermano Krebs
Massachusetts Institute of Technology (MIT)
Cambridge, MA, USA

for contributions to rehabilitation robotics and the understanding of neuro-rehabilitation

2014 Newly Elevated Fellows

Sanjay Krishna
University of New Mexico
Albuquerque, NM, USA

for contributions to infrared detectors and focal plane arrays

Benjamin Kroposki
National Renewable Energy Laboratory
Golden, CO, USA

for leadership in renewable and distributed energy systems integration in the electric power system

Jen-Tsai Kuo
Chang Gung University
Tao-Yuan, Taiwan

for contributions to planar microwave components and numerical electromagnetics

Yu-Kwong Kwok
University of Hong Kong
Hong Kong, China

for contributions to resource scheduling algorithms in parallel and distributed systems

Sam Kwong
City University of Hong Kong
Hong Kong, China

for contributions to optimization techniques in cybernetics and video coding

Ivan LaHaie
Integrity Applications Inc.
Ann Arbor, MI, USA

for contributions to near-to-far field radar signature transformations and radar measurement error mitigation

2014 Newly Elevated Fellows

Yen-Shin Lai
Taipei Tech
Taipei, Taiwan

for contributions to power converters and motor drives controlled by pulse width modulation

David Laidlaw
Brown University
Providence, RI, USA

for contributions to data visualization and analytics

J. Nicholas Laneman
University of Notre Dame
Notre Dame, IN, USA

for contributions to multihop relaying and cooperative communication for wireless networks

Anders Larsson
Chalmers University of Technology
Goteborg, Sweden

for contributions to optoelectronic device technology

Daniel Lee
University of Pennsylvania
Philadelphia, PA, USA

for contributions to machine learning algorithms for perception and motor control

Kwyo Lee
Korea Advanced Institute of Science and Technology
Daejeon, South Korea

for management and R&D leadership in semiconductor technology

2014 Newly Elevated Fellows

Byoung-ho Lee
Seoul National University
Seoul, South Korea

for contributions to diffractive optics and three-dimensional display technologies

Zachary Lemnios
IBM Corporation
Yorktown Heights, NY, USA

for leadership in advanced technologies for defense and security systems

John Leonard
Massachusetts Institute of Technology
Cambridge, MA, USA

for contributions to navigation and mapping for mobile robots and autonomous underwater vehicles

Haizhou Li
Institute for Infocomm Research
Singapore, Singapore

for leadership in multilingual speaker and language recognition

Mingyan Liu
University of Michigan
Ann Arbor, MI, USA

for contributions to modeling of wireless ad-hoc and sensor networks

Sheng Liu
Huazhong University of Science and Technology
Wuhan, China

for leadership in engineering development of LED packaging

2014 Newly Elevated Fellows

Bing Liu
University of Illinois at Chicago
Chicago, IL, USA

for contributions to data mining

Angel Lozano
Universitat Pompeu Fabra
Barcelona, Spain

for contributions to multiple-input, multiple-output antenna systems

Stepan Lucyszyn
Imperial College London
London, UK

*for contributions to monolithic microwave
integrated circuits and radio frequency microelectromechanical systems*

Howard Luong
Hong Kong University of Science and Technology
Hong Kong, China

for contributions to CMOS radio-frequency transceiver design

Robert Magnusson
University of Texas at Arlington
Arlington, TX, USA

for contributions to the invention of a new class of nanophotonic devices

Mariusz Malinowski
Warsaw University of Technology
Warsaw, Poland

for contributions to the modulation and control of power electronics converters

2014 Newly Elevated Fellows

Weidong Mao
Comcast Cable
Philadelphia, PA, USA

for contributions to video on demand technologies and cloud computing

Thomas Mc Dermott
University of Pittsburgh
Pittsburgh, PA, USA

for contributions to modeling and analysis of electric power distribution systems and lightning protection

William McEneaney
University of California, San Diego
La Jolla, CA, USA

for contributions to optimal control and estimation in nonlinear systems

William McFarland
Qualcomm Atheros
San Jose, CA, USA

for leadership in single-chip wifi radio systems-on-a-chip development

Thomas Mehlhorn
Naval Research Laboratory
Alexandria, VA, USA

for leadership in understanding intense pulsed electron and ion beams

Charles Melcher
University of Tennessee
Knoxville, TN, USA

for the discovery of a cerium-activated lutetium oxy-orthosilicate scintillator and its application to medical imaging

2014 Newly Elevated Fellows

Daniel Menasce
George Mason University
Fairfax, VA, USA

for contributions to research and education in performance evaluation of computer systems

Francisco Mesa
University of Seville
Seville, Spain

for contributions to the theory and computation of wave propagation in microwave planar structures

Cecilia Metra
Universit di Bologna
Bologna, Italy

for contributions to the on-line testing and fault-tolerant design of digital circuits and systems

Flix Miranda
NASA Glenn Research Center
Cleveland, OH, USA

for contributions to high-temperature superconductors and ferroelectric tunable microwave components for satellite communications

Dariush Mirshekar Syahkal
University of Essex
Colchester, UK

for contributions to electromagnetic modeling for microwave devices

Paul Mockapetris
Nominum
Los Altos, CA, USA

for contributions to the design and implementation of the Internet Domain Name Systems

2014 Newly Elevated Fellows

Philip Mok
Hong Kong University of Science & Technology
Hong Kong, China

for contributions to the design of analog power-management integrated circuits

Paolo Montuschi
Politecnico di Torino
Torino, Italy

for contributions to the theory and applications of digital arithmetic

Jeong-Sun Moon
HRL Laboratories, LLC
Malibu, CA, USA

for contributions to GaN- and graphene-based microwave and millimeter-wave devices

Yu Morton
Miami University
Oxford, OH, USA

for contributions to the understanding of ionospheric effects on global navigation satellite signals

Theodore Moustakas
Boston University
Boston, MA, USA

for contributions to the epitaxial growth of nitride semiconductors

Yi Murphey
University of Michigan-Dearborn
Dearborn, MI, USA

for contributions to optimal energy control in hybrid electric vehicles

2014 Newly Elevated Fellows

Samuel Naffziger
Advanced Micro Devices
Fort Collins, CO, USA

for leadership in the development of power management and low power processor technologies

Nathan Newman
Arizona State University School
of Energy, Matter & Transport
Tempe, AZ, USA

for contributions to the development and production of novel thin film materials and devices

Bin Ning
Beijing Jiaotong University
Beijing, China

for contributions to train operation control systems

Katia Obraczka
University of California at Santa Cruz
Santa Cruz, CA, USA

for contributions to energy-efficient protocols and routing in wireless networks

Matthew Ohland
Purdue University
West Lafayette, IN, USA

for contributions to and leadership in engineering education

Taiichi Otsuji
Tohoku University
Sendai, Japan

for contributions to plasmonic semiconductor integrated device technology for terahertz sensing

2014 Newly Elevated Fellows

Andrew Ott
PJM Interconnection, L.L.C.
Norristown, PA, USA

for leadership in the design, development, and operation of competitive wholesale electricity markets

Haldun Ozaktas
Bilkent University
Bilkent, Turkey

for contributions to transforms for signal processing in optics

Fernando Paganini
Universidad ORT Uruguay
Montevideo, Uruguay

for contributions to robust control and communication networks

Zhigang (David) Pan
University of Texas at Austin
Austin, TX, USA

for contributions to design for manufacturability in integrated circuits

Marios Papaefthymiou
University of Michigan
Ann Arbor, MI, USA

for contributions to the design of adiabatic circuits for high-performance computing

Konstantinos Papathanassiou
German Aerospace Center DLR
Wessling, Germany

for contributions to polarimetric interferometry for synthetic aperture radar

2014 Newly Elevated Fellows

Ioannis Paschalidis
Boston University
Boston, MA, USA

for contributions to the control and optimization of communication and sensor networks, manufacturing systems, and biological systems

Jain Pei
Simon Fraser University
Burnaby, BC, Canada

for contributions to data mining and knowledge discovery

Fatih Porikli
Mitsubishi Electric Research Labs
Cambridge, MA, USA

for contributions to computer vision and video surveillance

Jinyi Qi
University of California-Davis
Davis, CA, USA

for contributions to statistical image reconstruction for emission-computed tomography

Daniel Radack
Institute of Defense Analyses
Kensington, MD, USA

for leadership in microwave and millimeter-wave integrated circuit technologies and packaging techniques

Padma Raghavan
Pennsylvania State University
University Park, PA, USA

for contributions to robust scalable sparse solvers and energy-efficient parallel scientific computing

2014 Newly Elevated Fellows

Muhammed Rahman
University of New South Wales, Australia
New South Wales, Australia

for contributions to direct torque control of integrated permanent magnet machines

Balaji Rajan
Indian Institute of Science
Bangalore, India

for contributions to high performance and low complexity space-time code designs for wireless communication systems

Umakishore Ramachandran
Georgia Institute of Technology
School of Computer Science
Atlanta, GA, USA

for contributions to programming idioms for parallel and distributed systems and design of scalable shared memory systems

Jean-Pierre Raskin
Universit catholique de Louvain (UCL)
Louvain-la-Neuve, Belgium

for contributions to the characterization of silicon-on-insulator RF MOSFETs and MEMS devices

William Redman-White
University of Southampton
Southampton, UK

for contributions to chip design aspects of telecommunications systems and RFIC design

Robert Reed
Vanderbilt University
Nashville, TN, USA

for contributions to understanding the effects of single-event particle radiation on integrated circuits

2014 Newly Elevated Fellows

Martin Reisslein
Arizona State University
Tempe, AZ, USA

for contributions to the design and performance evaluation of metropolitan networks and multimedia networking mechanisms

Michael Reiter
University of North Carolina
Chapel Hill, NC, USA

for contributions to computer security and fault-tolerant distributed computing

Stephen Renals
University of Edinburgh
Edinburgh, UK

for contributions to speech recognition technology and its use in spoken language processing

Daniele Riccio
Universit di Napoli Federico II
Napoli, Italy

for contributions to satellite-based synthetic aperture radar imaging

Martin Richardson
University of Central Florida
Orlando, FL, USA

for contributions to the development and application of high-power and ultrafast lasers

Nick Ridler
National Physical Laboratory
Middlesex, UK

for contributions to traceability in precision high-frequency electromagnetic measurements

2014 Newly Elevated Fellows

Norma Riley
Northrop Grumman Corporation
Albuquerque, NM, USA

for contributions to ultra-wideband phased array technologies

Bradford Roberts
S&C Electric Company
Franklin, WI, USA

for contributions to the uninterruptible power supply industry and battery

Pedro Rodriguez
Abengoa Research
Sevilla, Spain

for contributions to the control of distributed power generation

Simon Rowland
University of Manchester
Manchester, UK

for contributions to the application of polymers in high voltage systems

Marcos Rubinstein
University of Applied Sciences Western Switzerland
Yverdon-les-Bains, Switzerland

for contributions to modeling lightning and its electromagnetic effects

Marina Ruggieri
University of Roma 'Tor Vergata'
Rome, Italy

for contributions to millimeter-wave satellite communications

2014 Newly Elevated Fellows

Paul Ryan
Dublin, OH, USA

for contributions to aviation safety

Ashutosh Sabharwal
Rice University
Houston, TX, USA

for contributions to the theory and experimentation of wireless systems and networks

Amir Said
Hewlett Packard Laboratories
Cupertino, CA, USA

for contributions to compression and processing of images and videos

Magdalena Salazar-Palma
Universidad Carlos III de Madrid
Madrid, Spain

for contributions to the application of numerical techniques to electromagnetic modeling

Bahgat Sammakia
State University of New York at Binghamton
Binghamton, NY, USA

for contributions to thermal management applications in electronic systems

Peter Sandborn
University of Maryland
College Park, MD, USA

for contributions to the analysis of cost and life-cycle of electronic systems

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Mark Sandler
Queen Mary University of London
London, UK

for contributions to digital signal processing techniques in audio and music applications

Guillermo Sapiro
Duke University
Durham, NC, USA

for contributions to computational mathematics for computer vision

Thilo Sauter
Austrian Academy of Sciences
Wiener Neustadt, Austria

for contributions to synchronization and security in automation networks

Stefan Schaal
University of Southern California
Los Angeles, CA, USA

for contributions to robot learning and modular motion planning

John Schneider
Ultra-Scan Corporation
Amherst, NY, USA

for leadership in advancing the field of ultrasonic imaging and fingerprint identification

Philip Schniter
Ohio State University
Columbus, OH, USA

for contributions to signal processing in communications

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Cheryl Schrader
Missouri University of Science and Technology
Rolla, MI, USA

for leadership and contributions in engineering education

Alexander Schuchinsky
Queen's University Belfast
Belfast, Northern Ireland, UK

for contributions to the electromagnetic theory of complex and artificial media and their applications to passive intermodulation and novel devices

Steven Scott
NVIDIA
Eau Claire, WI, USA

for contributions to the architectures of high-performance interconnection networks and supercomputers

Jong-Soo Seo
Yonsei University
Seoul, South Korea

for contributions to digital multimedia and mobile broadcasting technologies

Jamal Seyed Yagoobi
Worcester Polytechnic Institute
Worcester, MA, USA

for contributions to electrohydrodynamics

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University of Southern California
Los Angeles, CA, USA

for contributions to the fields of multimedia, geospatial and distributed databases

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Sanjay Shakkottai
University of Texas at Austin
Austin, TX, USA

for contributions to the modeling, design, and analysis of wireless networks

Puneet Sharma
Hewlett-Packard Laboratories
Palo Alto, CA, USA

for contributions to the design of scalable networking, software defined networks and energy efficiency in data centers

Jiancheng Shi
Institute for Remote Sensing Applications
Chinese Academy of Sciences
Beijing, China

for contributions to active and passive microwave remote sensing

Shiuhpyng Shieh
National Chiao Tung University
Hsinchu, Taiwan

for advances in pattern-oriented intrusion detection and fault-tolerant protection

Toru Shimizu
Renesas Electronics Corp.
Tokyo, Japan

for development of integrated multi-core microprocessors with large memories

Andrei Shkel
University of California-Irvine
Irvine, CA, USA

for contributions to micromachined gyroscopes

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Sandeep Shukla
Virginia Polytechnic Institute
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for contributions to applied probabilistic model checking for system design

Metin Sitti
Carnegie Mellon University
Pittsburgh, PA, USA

for contributions to micro- and nano-scale robotic systems

Raghupathy Sivakumar
Georgia Institute of Technology
Alpharetta, GA, USA

for contributions to the design of algorithms and protocols for wireless networking and mobile computing

Krishna Sivalingam
Indian Institute of Technology Madras
Chennai, India

for contributions to medium access control and energy-efficient protocol design in communication networks

Kiruba Sivasubramaniam
Electric Machines Laboratory
Niskayuna, NY, USA

for contributions to high power density electric machines for renewable energy and aerospace applications

Dejan Sobajic
Grid Consulting, LLC
San Jose, CA, USA

for contributions to applications of neural networks for power engineering

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Emina Soljanin
Bell Labs Alacatel-Lucent
Murray Hill, NJ, USA

for contributions to coding theory and coding schemes for transmission and storage systems

Jiming Song
Iowa State University
Ames, IA, USA

for contributions to algorithms in computational electromagnetics

Anthony Soong
Huawei Technologies
Plano, TX, USA

for contributions to the standardization of cellular communication systems

Ashok Srivastava
NASA Ames Research Center
Mountain View, CA, USA

for leadership and contributions in data mining to enhance the safety of aerospace systems

Mircea Stan
University of Virginia
Charlottesville, VA, USA

for contributions to power- and temperature-aware design of VLSI circuits and systems

John Stasko
Georgia Institute of Technology
Atlanta, GA, USA

for contributions to information visualization, visual analytics and human-computer interaction

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Richard Stern
Carnegie Mellon University
Pittsburgh, PA, USA

for contributions to robust speech recognition and auditory perception

Charles Sullivan
Dartmouth
Hanover, NH, USA

for contributions to the design of power electronic circuits and magnetics

Senichi Suzuki
NTT Corporation
Kanagawa, Japan

for contributions to high-density integrated silica-based planar lightwave circuits for optical communications

Jacobus Swart
State University of Campinas - UNICAMP
Campinas, Brazil

for contributions to microelectronics education in Brazil

Srinivas Tadigadapa
Pennsylvania State University
University Park, PA, USA

for contributions to microelectromechanical systems for fluidic and biochemical sensors

Takunori Taira
National Institutes of Natural Science
Institute for Molecular Science
Okazaki, Japan

for contributions to micro solid-state photonics

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Hiroshi Takahashi
Nippon Telegraph and Telephone Corporation
Kanagawa, Japan

for contributions to arrayed-waveguide gratings

Migaku Takahashi
Tohoku University
Sendai, Japan

for contributions to thin film technology for high-density recording media and heads

Kay Tan
National University of Singapore
Singapore, Singapore

for contributions to evolutionary multiobjective optimization

Kazuo Tanaka
University of Electro-Communications
Tokyo, Japan

for contributions to fuzzy control system design and analysis

Hisao Taoka
University of Fukui
Fukui, Japan

for contributions to computing technology for power system analysis and control

Anthony Tether
Sequoia Group, Inc.
Falls Church, VA, USA

for leadership in the advancement of commercial and defense technologies

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Patrick Thiran
Ecole Polytechnique Fdrale de Lausanne
Lausanne, Switzerland

for contributions to network performance analysis

Keiichi Tokuda
Nagoya Institute of Technology
Nagoya, Japan

for contributions to hidden Markov model-based speech synthesis

Wen Tong
Huawei Technologies
Ottawa, ON, Canada

for leadership in the development of 3G and 4G wireless communication systems

Germano Torres
Itajuba Federal University / PS Solutions
Itajuba, Brazil

for contributions to the application of intelligent systems to power systems

Elie Track
Hypres, Inc.
Stamford, CT, USA

for leadership in superconducting electronics and its applications

Trac Tran
Johns Hopkins University
Baltimore, MD, USA

for contributions to multirate and sparse signal processing

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Wade Trappe
Rutgers University
New Brunswick, NJ, USA

for contributions to information and communication security

A. Galip Ulsoy
University of Michigan
Ann Arbor, MI, USA

for contributions to the control of automotive and manufacturing systems and time-delay systems

Kerry Vahala
California Institute of Technology
Pasadena, CA, USA

for contributions to the physics, technology, and applications of quantum-confined semiconductor lasers and optical microresonators

Jan Van Houdt
imec
Leuven, Belgium

for contributions to flash memory devices

Marc Van Hulle
KU Leuven
Leuven, Belgium

for contributions to biomedical signal processing and biological modeling

Andre van Schaik
University of Western Sydney
Penrith, NSW, Australia

for contributions to neuromorphic circuits and systems

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Rene Vidal
Johns Hopkins University
Baltimore, MD, USA

for contributions to subspace clustering and motion segmentation in computer vision

Martin Vlach
Mentor Graphics
Portland, OR, USA

for leadership in analog and mixed signal hardware description languages and their simulation tools

Yi Wang
Cornell University
New York, NY, USA

for contributions to cardiovascular MRI development and quantitative susceptibility mapping

Zidong Wang
Brunel University
Middlesex, UK

for contributions to networked control and complex networks

Zhou Wang
University of Waterloo
Waterloo, ON, Canada

for contributions to perceptual image processing and quality assessment

Solveig Ward
Quanta Technology, LLC
Raleigh, NC, USA

for contributions to power system protective relaying, communications systems, and tele-protection

2014 Newly Elevated Fellows

Iram Weinstein
Science Applications International Corp.
McLean, VA, USA

for leadership in signal processing and test methods for radars detecting advanced aircraft and cruise missiles in severe terrain clutter

Ross Whitaker
University of Utah
Salt Lake City, UT, USA

for contributions to image and geometry processing, visualization, and medical image analysis

Sarah Wilson
Santa Clara University
Santa Clara, CA, USA

for contributions to orthogonal frequency division multiplexing

Ed Wu
University of Hong Kong
Hong Kong, China

for contributions to in vivo magnetic resonance imaging methods

Ya-Hong Xie
University of California
Los Angeles, CA, USA

for contributions to strained-silicon materials and devices

Changsheng Xu
Chinese Academy of Sciences
Beijing, China

for contributions to multimedia content analysis

2014 Newly Elevated Fellows

Sudhakar Yalamanchili
Georgia Institute of Technology
Atlanta, GA, USA

for contributions to high-performance multiprocessor architecture and communication

Rui Yang
University of Oklahoma
Norman, OK, USA

for contributions to the mid-infrared interband cascade laser and related optoelectronic devices

Boon-Lock Yeo
Google
Sunnyvale, CA, USA

for contributions to and leadership in image and video processing

Wei Yu
University of Toronto
Toronto, ON, Canada

for contributions to optimization techniques for multiple-input-multiple-output communications

Franco Zambonelli
Universita' di Modena e Reggio Emilia
Reggio Emilia, Italy

for contributions to software engineering for self-adaptive and self-organizing systems

Yongguang Zhang
Microsoft Research Beijing
Beijing, China

for contributions to software radio technology

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Guoqi Zhang
Philips Research/Delft University of Technology
Delft, The Netherlands

for contributions to heterogeneous micro/nano electronics packaging, system integration and reliability

Hong Zhang
University of Alberta
Edmonton, AL, Canada

for contributions to collective robotics and intelligent sensing in oil sand mining

Ji-Feng Zhang
Academy of Mathematics and Systems Science
Beijing, China

for contributions to parameter identification and adaptive control of stochastic systems

Wei-Xing Zheng
University of Western Sydney
Penrith, NSW, Australia

for contributions to signal processing and system identification

Shengli Zhou
University of Connecticut
Storrs, CT, USA

for contributions to wireless and underwater acoustic communications