2013 Newly Elevated Fellows

Ramachandra Achar
Carleton University
Ottawa, ON, Canada

for contributions to interconnect and signal integrity analysis in high-speed designs

Scott T. Acton
University of Virginia
Charlottesville, VA, USA

for contributions to biomedical image analysis

Robert Campbell Aitken
ARM -The Architecture for the Digital World
San Jose, CA, USA

for contributions to testing and diagnosis of integrated circuits

Stephen B. Alexander
Ciena Corporation
Linthicum, MD, USA

for contributions to optical communication technologies, systems, and architectures

Jeffrey G. Andrews
~~The~~ University of Texas at Austin
Austin, TX, USA

for contributions to cellular and ad-hoc wireless communications

Hiroyuki Arai
Yokohama National University
Yokohama-city, Kanagawa, Japan

for contributions to the design and analysis of low profile antennas for mobile communications

Carter M. Armstrong
L-3 Communications
San Carlos, CA, USA

for technical leadership in the development of high power microwave and millimeter-wave radiation sources, especially their power modules

2013 Newly Elevated Fellows

Rolf Alfons Aschenbrenner
Fraunhofer IZM
Berlin, Germany

for contributions to microelectronic packaging

Gaetano Assanto
University "Roma Tre"
Rome, Italy

for contributions to nonlinear optical guides and spatial solitons

Farrokh Ayazi
Georgia Institute of Technology
Atlanta, GA, USA

for contributions to micro-electro-mechanical resonators and resonant gyroscopes

Ralph H. Baer
R. H. Baer Consultants
Manchester, NH, USA

for contributions to the creation, development and commercialization of interactive video games

Salvo Baglio
University of Catania
Catania, Italy

for contributions to development of microsensors and magnetometers

R. Jacob Baker
Boise State University
Boise, ID, USA

for contributions to the design of memory integrated circuits

Alexander A. Balandin
University of California - Riverside
Riverside, CA, USA

for contributions to characterization of thermo-electric properties of semiconductor nanostructures and graphene

2013 Newly Elevated Fellows

Peter Michael Balma
Nutley, NJ, USA

for leadership in developing technical guides for electric power equipment

Andrew R. Barron
Yale University
New Haven, CT, USA

for contributions to information theory and statistics

John Edward Barth
Williston, VT, USA

for contributiions to design and development of embedded dynamic random access memory

Sanjoy K. Baruah
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Chapel Hill, NC, USA

for contributions to the design of real-time embedded systems

Khosrow Behbehani
University of Texas at Arlington
Arlington, TX, USA

for contributions to development of respiratory therapy devices in chronic pulmonary diseases
chronic pulmonary diseases

Amine Bermak
Hong Kong University of Science and Technology
Clear Water Bay, Kowloon, Hong Kong

for contributions to sensing and processing of vision and olfactory circuits and systems

Robert Emanuel Berry
Los Altos Hills, CA, USA

for leadership in high capacity satellite systems

2013 Newly Elevated Fellows

Jacek A. Blazewicz
Poznan University of Technology
Poznan, Poland

for contributions to combinatorial models of task scheduling

Vincent Daniel Blondel
Universit Catholique de Louvain (UCL)
Louvain-la-Neuve, Belgium

for contributions to computational analysis of systems and networks

Enrico Bocchieri
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for contributions to computational models for speech recognition

Wolfgang M. Boesch
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Graz, Austria

for technical leadership in microwave active devices and circuits

Maurice Emile Borgeaud
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for leadership in microwave remote sensing from spaceborne systems and retrieval of bio-physical and geo-physical parameters for land applications

Rodney Allen Brooks
Heartland Robotics
Cambridge, MA, USA

for contributions to theory and practice of behavioral robotics and artificial intelligence

Martin Buehler
Vecna Technologies
Watertown, MA, USA

for contributions to design and control of legged robots

2013 Newly Elevated Fellows

David Roger Bull
University of Bristol
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for contributions in video analysis, compression and communications

Ramon Caceres
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Florham Park, NJ, USA

for contributions to mobile computing and communications

Vince Daniel Calhoun
The Mind Research Network
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for contributions to data-driven processing of multimodal brain imaging and genetic data

Om-Prakash Narayan Calla
International Centre for Radio Science
Jodhpur, Rajasthan, India

for leadership in space applications of microwave technology and remote sensing

Jan Camenisch
IBM Zurich Research Lab
Rueschlikon, Switzerland

for contributions to privacy-enhancing cryptographic protocols

Charles F. Campbell
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Richardson, TX, USA

for contributions to microwave and millimeter-wave integrated circuits

Gail Carpenter
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for contributions to adaptive resonance theory and modeling of Hodgkin-Huxley neurons

2013 Newly Elevated Fellows

Robert Henry Caverly
Villanova University
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for contributions to modeling and design of radio frequency switching devices

Kwok Kee Chan
Chan Technologies Inc.
Brampton, ON, Canada

for development of planar lens beamforming networks and broadband antennas

Mansun Chan
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for contributions to CMOS device modeling

Yao-Wen Chang
National Taiwan University
Taipei, Taiwan

for contributions to VLSI physical design and manufacturability

Raja Chatila
ISIR - CNRS and University
Pierre and Marie Curie
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for contributions to robot navigation and cognitive robotics

Kwok Tong Chau
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for contributions to energy systems for electric and hybrid vehicles

Franois Chaumette
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for contributions to vision-based robot control

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Kuo-Ning Chiang
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HsinChu, Taiwan

for contributions to design and reliability of electronic packaging

Jeffrey R. Childress
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for contributions to nanostructured materials and their applications in magnetic recording

Tzi-Dar Chiueh
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for contributions to baseband processing integrated circuits for communications systems

Peter Sienpin Chow
ASSIA, Inc.
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for contributions to digital subscriber line technology

Andrzej Cichocki
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for contributions to applications of blind signal processing and artificial neural networks

David S. Cochran
Mt. View, CA, USA

for contributions to design, architecture and algorithms for HP-35, the first pocket scientific calculator

Gerard Denis Cohen
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for contributions to combinatorial aspects of coding theory

2013 Newly Elevated Fellows

Jonathan Hudson Connell
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for contributions to security and privacy in biometrics

Marco Corsi
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for development of high-speed amplifiers and analog to-digital convertors

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for contributions to multiterminal information theory

Paul William Coteus
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for contributions to packaging for high performance computing systems

David Robert Sime Cumming
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for contributions to integrated sensors and microsystem technology

Mihai Datcu
DLR, Oberpfaffenhofen / Germany
Wessling, Germany

for contributions to information mining of high resolution synthetic aperature radar and optical earth observation images

2013 Newly Elevated Fellows

Suman Datta
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for contributions to high-performance advanced silicon and compound semiconductor transistor technologies

Antonio De Maio
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for contributions to radar signal processing

Louis A. Dessaint
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for contributions to simulation and control of power systems and electric machines

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for contributions to wireless networks and systems

Yujie J. Ding
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for contributions to high terahertz power generators

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for contributions to precision metrology in electrical power applications

Matthew B. Dwyer
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for contributions to specification, testing, analysis, and verification of concurrent software

2013 Newly Elevated Fellows

Ahmed Mostafa Elantably
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for contributions to AC machinery for electrical traction

Yonina C. Eldar
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for contributions to compressed sampling, generalized sampling, and convex optimization

Ayman M. EL-Refaie
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for contributions to high-speed permanent magnet machines for transportation and aerospace systems

Ali Emadi
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for contributions to electric power conversion and control for electric and hybrid vehicles

Takatomo Enoki
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for contributions to compound semiconductor high speed integrated circuits for optical and wireless communication systems

Johan Heinrich R. Enslin
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for contributions to integration of renewable energy into power networks and using power electronics

David Esseni
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for contributions to characterization and modeling of mobility and quasi-ballistic transport in MOS transistors

2013 Newly Elevated Fellows

Rene-Jean Essiambre
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for contributions to fiber nonlinearities in optical telecommunication systems

Bruce Behruz Fardanesh
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for contributions to phasor measurement technology and Flexible AC Transmission Systems

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for contributions to medical Imaging and ultrasound-guided intervention

Elena Ferrari
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for contributions to security and privacy for data and applications

Jeffrey R. Foerster
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for leadership in wireless personal area networking

Giles Martin Foody
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for contributions to the remote sensing of land cover

Paolo Ettore Gamba
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for contributions to very high resolution remote sending image processing of urban areas

2013 Newly Elevated Fellows

Erwin Carl Gangl
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for development of digital avionics intra-communication systems and Mil-Std-1553

David Garlan
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for contributions to software architecture

Alan Dale George
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for contributions to reconfigurable and high-performance computing

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for contributions to measurement and modeling of broadband wireless channels and their applications to system design

Gerard Ghibaudo
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for contributions to electron device characterization and modeling

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for contributions to transmission optimization in digital subscriber loops

Dimitris Gizopoulos
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for contributions to self-testing and on-line error detection of microprocessor architectures

2013 Newly Elevated Fellows

Fred Glover
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for contributions to computer based optimization

Lalit Kumar Goel
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for contributions to the development and application of reliability techniques in electric power systems

Kenneth Goodson
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for contributions to thermal management of electronic packaging

Clément Gosselin
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for contributions to parallel robotic mechanisms and to underactuated robotic hands

Leonid Grcev
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for contributions to transient electromagnetic modeling of grounding systems

Marshall Greenspan
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for contributions to design and development multi-channel radars

Christine Guillemot
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for contributions to image and video compression

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Ruyan Guo
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for contributions to understanding of polarization phenomena in ferroelectric solid-solution systems

Hani Hagras
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for contributions to fuzzy systems

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for contributions to signal processing in adaptive arrays and multiple sensor radar

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for contributions to epitaxial technologies for wide bandgap semiconductor materials and devices

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for technical leadership in wireless communications

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for contributions to antennas and propagation for body-centric wireless communications

Jayant Ramaswamy Haritsa
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for contributions to data management systems

2013 Newly Elevated Fellows

James Hayward Harlow
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for leadership in IEEE technical and standardization committees on transformer technology

Sailing He
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for contributions to subwavelength photonics

Akira Hirose
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for contributions to theory and radar applications of complex-valued neural networks

Hakan Hjalmarsson
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for contributions to data-based controller design

James C. Hoe
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for contributions to high-level hardware design and synthesis

Donald Grahame Holmes
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for contributions to the modulation and control of solid-state power electronic conversion equipment

Anders Host-Madsen
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for contributions to communication theory for wireless networks

2013 Newly Elevated Fellows

Michael S. Hsiao
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for contributions to automatic test pattern generation of integrated circuits

Dan Mircea Ionel
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for contributions to the analysis, design and manufacturing of high efficiency electric machines

Sushil Jajodia
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for contributions to information security, data protection, and privacy

Ulrich Jakobus
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for leadership in hybrid computational tool development and commercialization

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for contributions to distributed computing systems and multicast communications

Rolf Johansson
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for contributions to system identification and adaptive control

Karl Henrik Johansson
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for contributions to the applications of hybrid and networked systems

2013 Newly Elevated Fellows

Leo Joskowicz
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for contributions to computer assisted surgery and medical image processing

Tadeusz Kaczorek
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for contributions to industrial control systems

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for development and application of high temperature superconductor electric power equipment

Lina Jamil Karam
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for contributions to perception-based visual processing, image and video communications, and digital filtering

Joel S. Karp
University of Pennsylvania
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for contributions to quantitative imaging of positron emission tomography

Nei Kato
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for contributions to satellite systems and network intrusion detection

Andre Kaup
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for contributions to video coding and object-based video signal processing

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for contributions to high-speed and precise lightwave modulation technologies

Jeffrey Owen Kephart
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for contributions and leadership in autonomic computing

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for contributions to two-dimensional L-band microwave interferometer design

Peter B. Key
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for contributions to optimal control of trunk reservations and distributed admission control in communication systems

Kazuro Kikuchi
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for contributions to coherent optical communication systems

Nicholas G. Kingsbury
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Cambridge, UK

for contributions to wavelet transform theory and filterbank design

2013 Newly Elevated Fellows

Masaru Kitsuregawa
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for contributions to high performance database technology

Geoffrey Stephen Klempner
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for contribution to steam turbine-driven generators

Gerhard Klimeck
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for contributions to atomistic quantum simulation tools for nanoelectronic devices

Kevin Wesley Kobayashi
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for contributions to monolithic microwave integrated circuits (MMIC)

Wei Hu Koh
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for development of three-dimensional multichip modules and flip chip interconnects

Joseph Andrew Konstan
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for contributions to human-computer interaction and social media applications

Yoram Koren
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for contributions to flexible automation and manufacturing systems

2013 Newly Elevated Fellows

Kenneth Kreutz-Delgado
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for contributions to sparse signal recovery algorithms and dictionary learning

Gerhard Johannes Krieger
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for contributions to advanced synthetic aperture radar systems

Kannan Krishnan
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for contributions to nano-magnetic technology in medicine

Kadaba R. Lakshmikumar
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for contributions to design of mixed signal CMOS integrated circuits for telecommunications

Riccardo Lanari
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for contributions to synthetic aperture radar processing

Carl Edward Landwehr
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for contributions to cybersecurity

David C. Larbalestier
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for contributions to development of superconducting materials leading to high field magnetics

2013 Newly Elevated Fellows

Sung-Ju Lee
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for contributions to algorithms for routing, multicasting, and interference mitigation in wireless local area networks

Luke Fleet Lester
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for contributions to quantum dot lasers

Juerg Leuthold
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for contributions to high-speed optical communications

Paul Leonard Lewin
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for contributions to high voltage cable engineering

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for contributions to all-optical signal processing and high-capacity fiber-optic transmission

Yanda Li
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for contributions to research and education in signal processing and bioinformatics

Li Erran Li
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for contributions to the design of algorithms and protocols for wireless networks

2013 Newly Elevated Fellows

Shunlin Liang
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for contributions to remote sensing from satellite observations

Mark Liao
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for contributions to image and video forensics and security

Daniel Liberzon
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for contributions to analysis and design of switched, nonlinear and quantized control systems

James P. Libous
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for contributions to switching noise minimization in CMOS technology

Ying-Dar Lin
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for contributions to multi-hop cellular communications and deep packet inspection

Tamas Linder
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for contributions to source coding and quantization

2013 Newly Elevated Fellows

Mikko Herman Lipasti
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for contributions to the microarchitecture and design of high-performance microprocessors and computer systems

Michal Lipson
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for contributions to design and applications of nanoscale photonic devices

Marco Liserre
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for contributions to grid connection of renewable energy systems and industrial drives

Eugene Litvinov
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for leadership in market design and power system control

Chih-Wen Liu
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for applications of phasor measurements to fault location and dynamics monitoring in power networks

Yan-Fei Liu
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for contributions to digital control techniques of power electronics converters

Jinhu Lu
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for contributions to complex networks and nonlinear circuits and systems

2013 Newly Elevated Fellows

Yi Ma
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for contributions to computer vision and pattern recognition

Kai-Kuang Ma
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for contributions to image processing and digital video coding

Gerald Quentin Maguire
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for contributions to mobile networks and cognitive radio systems

Ravi V. Mahajan
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for contributions to electronic packaging technology and thermal management of microprocessors

Jean Mahseredjian
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for contributions to computation and modeling of power systems transients

Danilo Mandic
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for contributions to multivariate and nonlinear learning systems

Madhav V. Marathe
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for contributions to development of formal models and software tools for understanding socio-technical networks

2013 Newly Elevated Fellows

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for contributions to multimode equivalent network representations and microwave filter design

Radu Marculescu
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for contributions to design and optimization of on-chip communication for embedded multicore systems

Igor L. Markov
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for contributions to optimization methods in electronic design automation

Paul Watson Marshall
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for contributions to understanding the impact of particle radiation on satellite reliability and survivabilty

Cian O. Mathuna
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for leadership in the development of power supply using micromagnetics on silicon

Carlos Mazure
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for leadership in the field of silicon on insulator and memory technologies

William Robert Mc Cown
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for leadership in the design, application, and manufacturing of superconducting generators and turbogenerators

2013 Newly Elevated Fellows

Alex McEachern
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for contributions to power quality measurement and immunity

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for contributions to the reliability physics of compound semiconductors devices

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for contributions to spoken language and multimodal systems

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for contributions to high-resolution radar cross section imaging

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for contributions to design and test of robust integrated circuits

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for contributions to the modal analysis of complex electromagnetic structures

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for contributions to on-line stability assessment tools for power systems

2013 Newly Elevated Fellows

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for development and commercialization of CMOS radio frequency micro electro mechanical systems

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for contributions to piezoelectric microelectro mechanical systems

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for contributions to self-excited induction generators and renewable energy applications

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for contributions to distributed computing, mobile computing and networking

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for development of software tools for human-computer interaction

Chris John Myers
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for contributions to design and testing for asynchronous, analog, and genetic circuits

Michael Robert Neuman
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for contributions to biomedical sensors and instrumentation with clinical applications

2013 Newly Elevated Fellows

Renovell Nichel
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for contributions to failure analysis and to defect-oriented tests of digital and analog circuits and systems

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for leadership in engineering and education in electromagnetics

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for contributions to millimeter-wave radio frequency systems

Cun-Zheng Ning
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for contributions to nanophotonics and nanowire lasers

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for contributions to CMOS technology using high dielectric constant materials and metal gate

Masaya Notomi
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for leadership in the development of photonic crystals and applications

Chikaodinaka Okechi-Dike Nwankpa
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for contributions to real-time computation in power system analysis

2013 Newly Elevated Fellows

Eiji Oki
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for contributions to high-performance packet switching and path computation technologies

Bikash C. Pal
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for contributions to power system stability and control

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for leadership in the development and commercialization of wide-bandgap semiconductor devices

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for contributions to convex optimization-based signal processing for communications

Constantinos B. Papadias
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for contributions to signal processing and coding for multi-antenna wireless systems

Antonia Papandreou
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for contributions to applications of time-frequency signal processing

Frank Chongwoo Park
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for contributions to geometric methods in robot mechanics

2013 Newly Elevated Fellows

Jong-Keun Park
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for contributions to design of electricity markets

Steven D. Pekarek
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for contributions to modeling and simulation of electrical machines

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for contributions to graph-theoretic and optimization-based approaches in pattern recognition and computer vision

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for contributions to characterization of extruded cables and components in their life cycle

David J. Perreault
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for contributions to design and application of very high frequency power electronic converters

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for contributions to microwave tomography and antenna designs

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2013 Newly Elevated Fellows

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for contributions to system identification, robust control, and applications to semiconductor manufacturing

Beatrice Popescu
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for contributions to image and video compression and networking

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for contributions to high-speed waveform digitizing instruments

Sanjay Raman
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for leadership in adaptive microwave and millimeter-wave integrated circuits

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for contributions to computer system design and evaluation

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for contributions to calibration and measurement of wireless communication systems

John Robertson
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for contributions to the understanding of high-k dielectrics and metal gate electrodes for CMOS technology

2013 Newly Elevated Fellows

Jon George Rokne
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for contributions to computer graphics and geographic information systems

Alton D. Romig
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for leadership in management of research and development for defense systems

Richard C. Rose
McGill University
Montreal, Canada

for contributions in acoustic modeling of automatic speech and speaker recognition

Caroline Anne Ross
Massachusetts Institute of Technology
Cambridge, MA, USA

for contributions to synthesis and characterization of nanoscale structures and films for magnetic and magneto-optical devices

Lucio Rossi
CERN
Geneva 23, Switzerland

for leadership in developing magnetic systems for the Large Hadron Collider

Mark E. Russell
Raytheon Company
Waltham, MA, USA

for leadership in the development and fielding of RF/microwave systems for national security and defense

Matthew Olanipekun Sadiku
Prairie View A&M University
Cypress, TX, USA

for contributions to computational electromagnetics and engineering education

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Corsi Sandro
CESI SpA
Castellanza, Varese, Italy

for contributions to wide-area voltage and reactive power regulation and protection

Sudeep Sarkar
University of South Florida
Tampa, FL, USA

for contributions to computer vision

Takuro Sato
Waseda University
Honjo-shi, Satitama-ken, Japan

for contributions to W-CDMA cellular standardization

Michael Antonio Savageau
University of California, Davis
Davis, CA, USA

for application of systems engineering concepts to molecular biology

Carsten W. Scherer
University of Stuttgart
Stuttgart, Germany

for contributions to optimization-based robust controller synthesis

John Brand Schneider
Washington State University
Pullman, WA, USA

for contributions to the finite-difference time-domain method in computational electromagnetics

Robert C. Scully
NASA (National Aeronautics & Space Administration)
League City, TX, USA

for contributions to protection of aerospace systems from lightning and electromagnetic interference

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Texas A&M University
College Station, TX, USA

for contributions to synchronization of communication systems

André Seznec
INRIA
Rennes, France

for contributions to design of branch predictors and cache memory for processor architectures

L. Dennis Shapiro
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Chestnut Hill, MA, USA

for leadership in development and commercialization of personal emergency response systems

Gaurav Sharma
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for contributions to electronic imaging and media security

Weiming Shen
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for contributions to agent-based collaboration technologies and applications

Prashant Shenoy
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Amherst, MA, USA

for contributions to the design and analysis of distributed systems and computer networking

William Shieh
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for contributions to coherent optical orthogonal frequency-division multiplexing

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Subhash L. Shinde
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for contributions to thermal management and 3D electronics packaging technologies

Claudio T. Silva
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for contributions to geometric computing and visualization

Pradeep K. Sinha
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for leadership in distributed and parallel processing systems

Kevin Skadron
University of Virginia
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for contributions to thermal modeling in microprocessors

James Charles Smith
Utility Wind Integration Group
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for leadership in integration of wind energy sources into the electric power grid

Stefano Soatto
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Los Angeles, CA, USA

for contributions to dynamic visual processes

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for contributions to improved efficiency and robustness of software

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for contributions to data management and scheduling in real-time systems

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for leadership in superconducting electronics and related technologies

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for contributions to power system analysis and simulation techniques

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for contributions to design and implementation of high-performance interconnection networks

Dennis Michael Sullivan
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for contributions to time-domain electromagnetic simulation

Ron Sun
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for contributions to cognitive architectures and computations

Francesco Svelto
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for contributions to analysis and design of radio frequency circuits and systems

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for contributions to technology for high speed interconnects

Masayuki Tanimoto
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for contributions to the development of free-viewpoint television and its MPEG standard

Valerie Elaine Taylor
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for contributions to performance enhancement of parallel computing applications

Randhir P.S. Thakur
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for leadership in development and implementation of single-wafer technology in semiconductor manufacturing

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for contributions to ultra-wideband wireless communications and localization

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for contributions to multilevel power electronic converter technology

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for contributions to wireless and digital subscriber line communications

Haruhiko Tsuchiya
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for contributions to single-mode optical fiber transmission

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for contributions to the development and application of random matrix methods in information theory

Matthew Turk
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Jerzy Tyszer
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for contributions to digital VLSI circuit testing and test compression

Kenji Uchino
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for contributions to pizeoelectric and electrostrictive actuators and electromechanical energy conversion

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Ramasamy Uthurusamy
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for contributions to data mining and artificial intelligence

Antonius F.W. Van der Steen
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for development of ultrasound diagnostic techniques for vulnerable plaque detection

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for contributions to multilayer antennas and computational electromagnetics

Ingrid M.R. Verbauwhede
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for contributions to design of secure integrated circuits and systems

John Paul Verboncoeur
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for contributions to computational plasma physics and plasma device applications

Pramod Viswanath
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for contributions to the theory and practice of wireless communications

Harish Viswanathan
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for contributions to wireless communication systems

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Xi-Zhao Wang
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for contributions to development of fuzzy decision tree and clustering techniques

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for contributions to multi-level cache hierarchy and multiprocessor systems

Wei-Yen Wayne Wang
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for contributions to observer-based adaptive fuzzy-neural control for uncertain nonlinear systems

Yuan Wang
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for contributions to stability and control of nonlinear systems

Karl Foster Warnick
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for contributions to theoretical and numerical analysis of phased-array antennas and microwave systems

James Lewis Wayman
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for contributions to standards, testing, and analysis of biometrics in automated human recognition systems

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Tsachy Weissman
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for contributions to information theory and its application in signal processing

David James Wetherall
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for contributions to the design of flexible, robust, and secure networks

Philip Charles Woodland
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for contributions to large vocabulary speech recognition

Tzong-Lin Wu
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for contributions to noise mitigation technologies and electromagnetic compatibility design on printed circuit boards

Dapeng Wu
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for contributions to video communication and processing and wireless networking

Feng Wu
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for contributions to visual data compression and communication

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for contributions to robot compliant motion and haptic interaction

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for contributions to power electronic applications to renewable energy systems

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for contributions to multimodal human-computer interaction

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for contributions to compound semiconductor MOSFET materials and devices

Eric Morgan Yeatman
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for contributions to the development of micro-electro-mechanical devices

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Technology (IIIT) Hyderabad
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for contributions to digital signal processing research and education

Wen-Yan Yin
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for contributions to multi-physics solutions for intentional electromagnetic interference and nanostructure electromagnetic compatibility

Chen-Hua Douglas Yu
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for leadership in development of interconnect technology for integrated circuits

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Tak-Shing Peter Yum
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for contributions to the architecture and resource management of communication networks

Ramin Zabih
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for contributions to computer vision algorithms

Ephraim Zehavi
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for contributions to pragmatic coding and bit interleaving

Qing Zhao
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for contributions to learning and decision theory in dynamic systems with applications to cognitive networking

Zhi-Hua Zhou
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for contributions to learning systems in data mining and pattern recognition

Glenn Zorpette
IEEE (Spectrum Magazine)
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for contributions to professional communication in electrical and electronics technology

Geoffrey G. Zweig
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for contribuitons to advance speech recognition