2022 NEWLY ELEVATED FELLOWS

Dr. Amin Abbosh
Brisbane, Queensland Australia

for contributions to electromagnetic medical imaging

Dr. Daniel Abramovitch
Palo Alto, CA USA

for contributions to the development of algorithms for control of mechatronic systems

Prof. Behcet Acikmese
Seattle, WA USA

for contributions to optimization-based nonlinear control and to planetary landing systems

Bo Ai
Beijing, China

for contributions to channel modeling and wireless communications in high-speed railways

Prof. Maruthi Akella
Austin, TX USA

for contributions to spacecraft control systems

Prof. J. Marcos Alonso
Gijon, Asturias, Spain

for contributions to power electronics in lighting applications
Prof. Ghassan Alregib  
Atlanta, GA USA

*for contributions to perception-based and context-based visual signal processing*

Prof. Lay-Kee Ang  
Singapore, Singapore

*for contributions to electron emission and space charge effects in nanodiode and quantum materials*

Murali Annavaram  
Los Angeles, CA USA

*for contributions to heterogeneous architectures for energy-efficient computing systems*

Prof. Grigoris Antoniou  
Huddersfield, United Kingdom

*for contributions to knowledge representation within artificial intelligence and to the semantic web*

Shoko Araki  
Kyoto, Japan

*for contributions to blind source separation of noisy and reverberant speech signals*

Prof. Harry Asada  
Cambridge, MA USA

*for the design, modeling, and control of direct drive robotic arms*

Kemal Aygun  
Tempe, AZ USA

*for contributions to high-bandwidth and high-speed packaging and socket technologies*
Rajapandian Ayyanar
Tempe, AZ USA

for contributions to power conversion and grid integration of renewable resources

Arturo Azcorra
Leganes, Madrid, Spain

for leadership in developing the midhaul and core of 5G networks

Toshihiko Baba
Yokohama, Japan

for contributions to photonic nanostructure waveguides and emitters

Dr. Michiel Bacchiani
Tokyo, Japan

for leadership in commercial automatic speech recognition systems

Prof. Thomas Baeck
Waltrop, Germany

for contributions in synthesizing evolutionary computation

Prof. Ruth Bahar
Providence, RI USA

for contributions to modeling and design of power-aware and noise-tolerant nanoscale computing systems

Prof. Dominique Baillargeat
Limoges, Limousin, France

for contributions to developments of nanomaterials for RF packaging and sensors
Dr. Anirban Bandyopadhyay
Pleasanton, CA USA

for leadership in silicon RF-SOI technologies

Sujata Banerjee
Palo Alto, CA USA

for leadership in programmable and energy efficient networks

Prof. Suman Banerjee
Madison, WI USA

for development of tools to improve performance and usability of wireless systems

Prof. Seth Bank
Austin, TX USA

for contributions to the growth of optoelectronic materials by molecular beam epitaxy

Cullen Bash
Los Gatos, CA USA

for contributions to improving the sustainability and energy efficiency of data center infrastructure

Prof. Stephen Beeby
Southampton, Hampshire, United Kingdom

for contributions to energy harvesting and its application in e-textiles

Boualem Benatallah
Kensington, New South Wales, Australia

for contributions to declarative service composition and web services middleware
Suparna Bhattacharya
Bangalore, Karnataka, India

for contributions to Linux kernel for enterprise and advanced data processing systems

Dr. Subhashish Bhattacharya
Raleigh, NC USA

for contributions to power conversion systems and active power filters

Prof. Tianshu Bi
Beijing, China

for contributions to synchrophasor technology and protective relay applications

Dr. Stephan Biller
Chapel Hill, NC USA

for leadership in the applications of Internet of Things and Artificial Intelligence in manufacturing industry

Prof. Emil Bjornson
Kista, Stockholm, Sweden

for contributions to multi-antenna and multi-cell wireless communications

Dr. M Brian Blake
Washington, DC USA

for contributions to web-based software engineering
Dr. Laure Blanc-feraud  
Sophia Antipolis, Cedex, France

_for contributions to inverse problems in image processing_

Dr. Petros Boufounos  
Winchester, MA USA

_for contributions to compressed sensing_

James Buckwalter  
Santa Barbara, CA USA

_for contributions to high-efficiency millimeter-wave power amplifiers and optical transceivers in SOI technologies_

Dr. Humberto Bustince  
Pamplona, Navarra, Spain

_for contributions to information fusion under uncertainty_

Prof. Darwin Caldwell  
Bury, United Kingdom

_for contributions to Actuator Technology, Legged Systems and Soft Human Friendly Robotic_

Prof. Erik Cambria  
Singapore, Singapore

_for contributions to affective computing and sentiment analysis_

Prof. Ming Cao  
Groningen, Netherlands

_for contributions to multi-agent control systems for sensor, robotic and social networks_
Anita Carleton  
Sewickley, PA USA  

for leadership in the advancement of software measurement and practices  

Prof. Joao Paulo Catalao  
Tortosendo, Portugal  

for contributions to power system operations and demand response  

Dr. Andrea Cavallini  
Bologna, Italy  

for contributions to the development of electrical insulation diagnostics through partial discharge measurements  

Dr. Nacer Chahat  
Altadena, CA USA  

for development of CubeSat and Spacecraft antennas for inter-planetary missions  

Prof. Samarjit Chakraborty  
Chapel Hill, NC USA  

for contributions to system-level timing analysis of cyber-physical systems  

Prof. Anthony Chan Carusone  
Toronto, ON Canada  

for contributions to integrated circuits for digital communication  
Prof. Nitesh Chawla  
Notre Dame, IN USA  

for contributions to learning from imbalanced data and heterogeneous graphs
Prof. Wenquan Che  
Guangzhou, Guangdong, China  

for contributions to planar transmission line structures for microwave passive components

Dr. Jinjun Chen  
Melbourne, Victoria, Australia  

for contributions to scalable architecture for cloud data storage and processing

Prof. Minghua Chen  
Kowloon Tong, Hong Kong  

for contributions to delay-critical networked systems

Dr. Baoxing Chen  
Westford, MA USA  

for contributions to integrated signal-power isolation and integrated magnetics

Dr. Zhihong Chen  
West Lafayette, IN USA  

for contributions to the understanding and applications of low-dimensional nanomaterials

Prof. Hongsheng Chen  
Hangzhou, Zhejiang, China  

for contributions to electromagnetic metamaterial and invisibility cloak

Prof. Xinkai Chen  
Saitama, Saitama, Japan  

for contributions to nonlinear adaptive control and nonlinear observer design for mechatronic systems
Prof. Xiang Cheng  
Beijing, China  

*for contributions to vehicular communication channel modeling and system design*

Prof. Alessandro Chiuso  
Padova, Padua, Italy  

*for contributions to subspace and Bayesian identification methods*

Dr. Thomas Cho  
Seongnam-Si, Gyeonggi-do, South Korea  

*for leadership and contributions in CMOS RFIC design and commercialization of wireless mobile systems*

Prof. Ki Chon  
Storrs, CT USA  

*for the development of novel algorithms to detect atrial fibrillation from smart wearable devices*

Chee-Yee Chong  
Los Altos, CA USA  

*for contributions to information fusion methods for multi-sensor tracking*

Dr. Thomas Clancy  
Arlington, VA USA  

*for leadership in security and wireless communications*
Prof. Holger Claussen
Maynooth, Kildare, Ireland

for contributions to small cell wireless network technology

Walter Cleaveland
Arlington, VA USA

for contributions to verification tools for finite-state and cyber-physical systems

Prof. Bruno Clerckx
London, United Kingdom

for contributions to multi-antenna communications and wireless power transmission

Todd Coleman
La Jolla, CA USA

for contributions to biomedical signal processing and leadership in neuro-engineering

Sinem Coleri
Sariyer, Istanbul, Turkey

for contributions to wireless technologies and sensor networks

Prof. Andrea Conti
Ferrara, Italy

for contributions to wireless communication and localization systems

Mauro Conti
Montecastrilli, Terni, Italy

for contributions to communications network security
Prof. Alessandra Costanzo
Bologna, Italy

for contributions to nonlinear electromagnetic co-design of RF and microwave circuits

Linglong Dai
Beijing, China

for contributions to massive MIMO

Prof. Luca Daniel
Cambridge, MA USA

for contributions to modeling and simulation of electronic systems

Paul Dayton
Chapel Hill, NC USA

for contributions to contrast agents and contrast-enhanced ultrasound in medical diagnostics and therapeutics

Dr. Riccardo Degaudenzi
Den Haag, Zuid-Holland, Netherlands

for leadership in digital communication standards for satellite communications

F. Degertekin
Atlanta, GA USA

for contributions to micromachined ultrasonic and optomechanical transducers and systems

Dr. Fang Deng
Novi, MI USA

for contributions to permanent magnet drive design and control methodology
Massimiliano Di Ventra
La Jolla, CA USA

for contributions to quantum transport in nanoscale systems and in-memory computing

Prof. Alexandros G. Dimakis
Austin, TX USA

for contributions to distributed coding and learning

Sorin Draghici
Ann Arbor, MI USA

for contributions to the analysis of high-throughput genomics and proteomics data

Donald Dunn
Highlands, TX USA

for contributions to process control systems

Dr. Trung Q. Duong
Belfast, United Kingdom

for contributions to cooperative communications and physical layer security

Prof. Tarek El-bawab
Boston, MA USA

for contributions to the definition, recognition, accreditation criteria, and program development of modern network-engineering education

R. Scott Erwin
Albuquerque, NM USA

for leadership and contributions to the development, implementation and on-orbit demonstration of spacecraft control technologies
Dr. Carol Espy-wilson  
College Park, MD USA  

*for contributions to speech enhancement and recognition*  

Dr. Sonia Fahmy  
West Lafayette, IN USA  

*for contributions to design and evaluation of network protocols and sensor networks*  

Lingling Fan  
Tampa, FL USA  

*for contributions to stability analysis and control of inverter-based resources*  

Prof. Martin Farach-Colton  
New York, NY USA  

*for contributions to data structures for storage systems*  

Junlan Feng  
Beijing, China  

*for leadership in spoken dialog applications, AI platform, and network intelligence*  

Dr. Bonnie Ferri  
Atlanta, GA USA  

*for contributions to hands-on learning and leadership in higher education*  
Prof. Cedric Fevotte  
Toulouse, Midi-Pyrenees, France  

*for contributions to nonnegative matrix factorization, source separation, and spectral unmixing*
Dr. Alessandro Foi  
Tampere, Finland

_for contributions to image restoration and noise modeling_

Prof. Giancarlo Fortino  
Rende, Italy

_for contributions to Engineering of IoT-enabled Wearable Computing Systems_

Prof. Eric Fosler-lussier  
Columbus, OH USA

_for contributions to spoken language technology by integrating linguistic models with machine learning_

Daniel Friedman  
Yorktown Heights, NY USA

_for contributions to RFID and phase-lock-loop systems_

Prof. Xiaoming Fu  
Goettingen, Niedersachsen, Germany

_for contributions to resource management in edge computing and networking_

Ibrahim Gedeon  
Edmonton, AB Canada

_for leadership in consumer-oriented applications of broadband communications_

Apostolos Georgiadis  
The Hague, Zuid-Holland, Netherlands

_for contributions to designs of RF energy harvesting circuits_
Dr. Tobias Geyer  
Ennetbaden, Aargau, Switzerland

for contributions to control and modulation of high-power converters

Simon Godsill  
Cambridge, United Kingdom

for contributions to statistical signal processing for tracking and audio restoration

Dr. Nada Golmie  
Gaithersburg, MD USA

for contributions to wireless technologies and standards

Prof. Albert Guillen I Fabregas  
Cambridge, United Kingdom

for contributions to the analysis and design of wireless communication systems

Deniz Gunduz  
Reading, Reading, United Kingdom

for contributions to the foundations of source-channel coding, cooperative and cache-aided communications

Dr. Chuanxiong Guo  
Bellevue, WA USA

for contributions to design of data center networking

Prof. Puneet Gupta  
Los Angeles, CA USA

for contributions to the design and co-optimization of integrated circuits
Vijay Gupta
Notre Dame, IN USA

*for contributions to networked and cyber-physical systems*

Prof. Edmundo Gutierrez-d.
Tonantzintla, Puebla, Mexico

*for contributions to education and infrastructure in the field of electron devices in Latin America*

Prof. Junwei Han
Xi'an, China

*for contributions to visual saliency detection and image understanding*

Prof. Gerhard Hancke
Kowloon, Hong Kong

*for contributions to secure and resilient wireless technology for the Industrial Internet-of-Things*

Tony Heinz
Stanford, CA USA

*for contributions to spectroscopic techniques, nanophotonics, and optical nanomaterials*

Jeffrey Hesler
Charlottesville, VA USA

*for contributions to development of terahertz components and instrumentation*

Prof. Daniel Hissel
Ronchamp, France

*for contributions to the development of hydrogen-energy systems and their industrial applications*
Torsten Hoefler  
Pfaeffikon, Switzerland

*for contributions to large-scale parallel processing systems and supercomputers*

Prof. Heath Hofmann  
Ann Arbor, MI USA

*for contributions to electric machinery and drive systems*

Dr. David Horsley  
Davis, CA USA

*for development of micro-electromechanical systems for ultrasonic transduction*

Dr. Steve Hranilovic  
Hamilton, ON Canada

*for contributions to optical wireless communication systems*

Sun-Yuan Hsieh  
Tainan, Taiwan

*for contributions to fault-tolerance for internet and cloud computing*

Guohan Hu  
Yorktown Heights, NY USA

*for contributions to Spin-Transfer-Torque MRAM materials and devices*

Qi Huang  
Chengdu, Sichuan, China

*for leadership in informatics for smart electric energy system*
Prof. Jin Hur
Incheon, South Korea

for contributions to design of permanent magnet synchronous motors

Prof. Ihab Ilyas
Waterloo, ON Canada

for contributions to data integration, data cleaning and rank-aware query processing

Prof. Tommaso Isernia
Reggio Calabria, Italy

for contributions on antennas synthesis and inverse scattering problems

Dr. Mahesh Iyer
Fremont, CA USA

for leadership in ASIC and FPGA Electronic Design Automation

Prof. Mathews Jacob
Iowa City, IA USA

for contributions to computational biomedical imaging

Prof. Tseng King Jet
Singapore, Singapore

for contributions to permanent magnet machines and distributed energy resources

Dr. Jack Jewell
Boulder, CO USA

for development of vertical-cavity surface-emitting lasers
Prof. Yusheng Ji  
Tokyo, Japan  

*for contribution to distributed computing in mobile and dynamic systems*  

Prof. Jian Xun Jin  
Tianjin, China  

*for development of operational high-temperature superconducting power devices*  

Prof. Admela Jukan  
Braunschweig, Germany  

*for contributions to optical communications and networking*  

Prof. Murat Kantarcioglu  
Richardson, TX USA  

*for contributions to data management and analytics*  

Prof. Soummya Kar  
Pittsburgh, PA USA  

*for contributions to distributed signal processing*  

Stamatis Karnouskos  
Berlin, Germany  

*for leadership in industrial cyber-physical systems and smart grids*  

Prof. Hideki Kawahara  
Ikoma, Nara Japan  

*for contributions to auditory-inspired speech signal processing and science*
Prof. Kevin Kelly  
Houston, TX USA

for contributions to compressive imaging

Prof. Andrew Kent  
New York, NY USA

for contributions to the application of spin-transfer torques in nano-scale devices

Prof. Vinod Khadkikar  
Abu Dhabi, United Arab Emirates

for contributions to power quality solutions

Prof. Latifur Khan  
Plano, TX USA

for contributions to stream analytics and ontology for big data

Prof. Aberrahmane Kheddar  
Tsukuba, Japan

for contributions to robotic haptics and humanoids

Robert Killey  
London, United Kingdom

for contributions to digital signal processing for high-speed, nonlinear optical communications systems

Prof. Chul-Hwan Kim  
Suwon, Gyeonggi-do, South Korea

for contribution to protective relaying methods to reduce power system outages
Dr. Jin-Woo Kim
Fayetteville, AR USA

*for contributions to nanoscale fabrication of bio/nano-hybrid materials*

William King
Urbana, IL USA

*for contributions to nano-scale measurements and nano-manufacturing*

Dr. John Kitching
Boulder, CO USA

*for contribution to Chip-Scale Atomic Clock and Atomic Magnetometer*

Prof. Elisa Konofagou
New York, NY USA

*for contributions to ultrasound for cardiovascular and cancer diagnosis, neuromodulation and brain drug delivery*

Dr. Slawomir Koziel
Reykjavik, Iceland

*for contributions to modeling and optimization of microwave devices and circuits*

Dr. Hariharan Krishnan
Troy, MI USA

*for contributions to connected vehicle safety systems*

Dr. Katherine Kuchenbecker
Stuttgart, Baden-Wuerttemberg, Germany

*for contributions to interactive haptic systems and robotic touch perception*
Dr. Sarah Kurtz  
Merced, CA USA  

_for contributions to photovoltaic devices and systems reliability_

Ioannis Kymissis  
New York, NY USA  

_for contributions to thin-film electronics for displays and sensors_

Michael Langberg  
Buffalo, NY USA  

_for contributions to the theory and practice of network coding_

Prof. Buon Kiong Lau  
Lund, Sweden  

_for contributions to multi-antenna systems in wireless communications_

Kang-Won Lee  
Seoul, South Korea  

_for contribution to development of SDN and virtualization technologies for 5G wireless networks_

Prof. AMIR Leshem  
Ramat-Gan, Israel  

_for contributions to multi-channel and multi-agent signal processing_

Dr. Yves Letraon  
Luxembourg, Luxembourg  

_for contribution to software analysis and testing_
Dr. Feifei Li
Salt Lake City, UT USA

_for contributions to database query processing and optimization, and to cloud database systems_

Qing Li
Kowloon, Hong Kong

_for contributions to machine learning in multimedia, data mining and data warehousing_

Prof. Zhijun Li
Shanghai, Shanghai China

_for contributions to control systems for wearable robotics and bio-mechatronics_

Prof. Keqiu Li
Tianjin, China

_for contributions to resource-efficient and QoS-oriented cloud computing_

Youfu Li
Kowloon, Hong Kong

_for contributions to active visual sensing_

Prof. Yingbin Liang
Dublin, OH USA

_for contributions to information theoretic methods for wireless systems_

Prof. Shih-Chii Liu
Zurich, Switzerland

_for contributions to neuromorphic engineering_
Prof. Tian-Hua Liu
Taipei, Taiwan

for contributions to sensorless control for AC drives

Ping Liu
Arlington, TX USA

for contributions to permanent magnet research and magnetic nanoparticle synthesis and characterization

Shan Liu
San Jose, CA USA

for leadership in multimedia and multicore processors

Prof. David Lo
Singapore, Singapore

for contributions to synergizing software engineering and data mining

Dr. Hang-Ting Lue
Hsinchu, Taiwan

for contributions to charge-trapping memories and 3D NOR flash

Prof. Robyn Lutz
Ames, IA USA

for contributions to software requirements for safety-critical systems
Prof. Siwei Lyu
Buffalo, NY USA

for contributions to digital media forensic technologies
Trevor Maguire
Winnipeg, MB Canada

*for Leadership in the Development of Large Scale Real-Time Power Systems Simulators*

Roland Malhame
Montreal, QC Canada

*for contributions to mean-field games and stochastic hybrid systems*

Dr. Shie Mannor
Haifa, Israel

*for contributions to reinforcement learning and decision-making under uncertainty*

Prof. Zhuoqing Mao
Ann Arbor, MI USA

*for contributions to performance and security of internet routing and mobile systems*

Prof. Ignacio Matias
Pamplona, Navarra, Spain

*for contributions to photonic sensor research and transference to industry*

Prof. Saad Mekhilef
Kuala Lumpur, Malaysia

*for contributions to control methods for photovoltaic systems and multi-level inverters*

Dr. Igor Mezic
Santa Barbara, CA USA

*for contributions to modeling and control using Koopman operator techniques*
Dr. Zetian Mi  
Ann Arbor, MI USA  

*for contributions to III-nitride photonics and clean energy*  

Prof. Silvestro Micera  
Lausanne, Switzerland  

*for contributions to restoration of human sensorimotor functions using engineered neuroprostheses*  

Prof. Sudip Misra  
Kharagpur, West Bengal, India  

*for contributions to intelligent sensing in constrained IoT environments*  

Dr. Moriyasu Miyazaki  
Sagamihara City, Kanagawa, Japan  

*for leadership in developments of airborne active-phased-array radars and satellite communication microwave subsystems*  

Dr. Hiroyuki Mizuno  
Kokubunji, Tokyo, Japan  

*for contributions to leakage current reduction in integrated circuits*  

Dr. Apurva Mody  
Chelmsford, MA USA  

*for leadership in cognitive dynamic spectrum sharing and standards*
Dr. Webert Montlouis
Columbia, MD USA

*for leadership in the development of radar systems*

Prof. Masato Motomura
Yokohama, Kanagawa, Japan

*for contributions to memory-logic integration of reconfigurable chip architecture*

Dr. Debargha Mukherjee
Mountain View, CA USA

*for leadership in standard development for video-streaming industry*

Prof. Vittorio Murino
Genova, Italy

*for contributions to signal processing for behavior analysis*

Dr. Mukesh Nagpal
Burnaby, BC Canada

*for contributions to economic and safe integration of distributed renewables in electric utility networks*

Prof. Babak Nahid-Mobarakeh
Hamilton, ON Canada

*for contributions to service continuity of electric motor drive systems*

Dr. Sae Woo Nam
Boulder, CO USA

*for pioneering development of superconducting single-photon detectors with applications to quantum communications and quantum computing*
Prof. Abdolhosein Nasiri  
Milwaukee, WI USA

*for contributions to high power converters for energy storage systems and microgrids*

Dr. Isaac Nassi  
Los Gatos, CA USA

*for leadership in parallel and distributed systems and adaptive systems*

Prof. Nassir Navab  
Garching, Bayern, Germany

*for contributions to augmented reality in medicine and computer-assisted interventions*

Dr. Krishna Nayak  
Long Beach, CA USA

*for contributions to real-time magnetic resonance imaging of the human heart and vocal tract airway*

Jerald Nespor  
Moorestown, NJ USA

*for contributions to Digital AESA Radar Systems*

Philip Neudeck  
Cleveland, OH USA

*for contributions to silicon carbide electronics and crystal growth*
Dr. Nathan Newbury  
Boulder, CO USA

*for contributions to optical frequency comb metrology*

Prof. Sam Noh  
Ulsan, South Korea

*for contributions to storage system software for flash and nonvolatile memory*

Dr. Yoshihiro Ohba  
Kawasaki, Kanagawa, Japan

*for contributions to standardization of network security protocols*

Prof. Mario Paolone  
Lausanne, Vaud, Switzerland

*for contributions to situational-awareness and control of power distribution systems*

Dr. Sung Ik Park  
Daejeon, South Korea

*for contributions to physical layer development of broadcast systems*

Prof. Gianmario Pellegrino  
Torino, Italy

*for contributions to Synchronous Reluctance machines identification and control*
Dr. Thomas Penzel
Berlin, Germany

for contributions to biosignal analysis for sleep medicine

Prof. Adrian Perrig
Zurich, Switzerland

for contributions to network and system security

Dr. Anh-Vu Pham
Davis, CA USA

for contribution to organic packaging technologies

Gopal Pingali
Bengaluru, Karnataka, India

for contributions to hybrid cloud computing and real-time multimedia systems

Prof. Joyce Poon
Toronto, ON Canada

for contributions to integrated photonics on silicon and resonant microphotonic devices

Prof. Eric Pop
Stanford, CA USA

for contributions to phase-change memory

Prof. Marjan Popov
Delft, Netherlands

for contributions to high-frequency transformer and circuit breaker modeling
Christophe Prieur  
Grenoble, France  

*for contribution to nonlinear control systems*

Prof. GuoJun Qi  
Bellevue, WA USA  

*for contributions to multimedia analysis and applications*

Rajesh Rajamani  
Saint Paul, MN USA  

*for contributions to vehicle control in intelligent transportation systems*

Satish Ranade  
Las Cruces, NM USA  

*for contributions to integration of renewable and distributed energy resources into power systems*

Dr. Clive Randall  
University Park, PA USA  

*for contributions to the formulation, processing, and characterization of electroceramics*

Prof. Arijit Raychowdhury  
Atlanta, GA USA  

*for contributions to energy-efficient adaptive integrated circuit design*  
Prof. Daniel Razansky  
Zurich, Switzerland  

*for contributions to multispectral optoacoustic tomography*
Dr. Sorel Reisman  
Newport Beach, CA USA

*for leadership in design, implementation and adoption of open education resources*

Dr. Christopher Rodenbeck  
Annandale, VA USA

*for contributions to radar microsystems for ultrawideband and millimeter-wave applications*

Dr. Haisheng Rong  
Santa Clara, CA USA

*for contributions to silicon photonics devices*

Prof. Thomas Runkler  
Muenchen, Germany

*for contributions to computational intelligence in clustering and control*

Maryam Saeedifard  
Atlanta, GA USA

*for contributions to modulation, control and protection of multilevel converters for high-voltage DC transmission*

Tara Sainath  
Jersey City, NJ USA

*for contributions to deep learning for automatic speech recognition*

Prof. Ricardo Sanfelice  
Santa Cruz, CA USA

*for contributions to hybrid feedback control systems*
Prof. Bulent Sarlioglu
Madison, WI USA

for applications of electrical drives in the aerospace industry

Mladen Sasic
Etobicoke, ON Canada

for contributions to development of diagnostics testing of motor and generator windings

Dr. Tadashi Sawata
Coventry, United Kingdom

for contributions to motor drive systems for more electric aircraft

Dr. Peter Seiler
Ann Arbor, MI USA

for contributions to robust control theory and computational tools

Dr. Bernhard Sendhoff
Offenbach/Main, Hessen, Germany

for contributions to evolutionary optimization and its engineering applications

Devavrat Shah
Cambridge, MA USA

for contributions to network and information science, inference and machine learning

Prof. Shiguang Shan
Haidian, Beijing, China

for contributions to visual signal processing and recognition
Prof. Heng Tao Shen
Chengdu, Sichuan, China

for contributions to multimedia content understanding and retrieval

Prof. Timothy Sherwood
Santa Barbara, CA USA

for contributions to computer system security and performance analysis

Steven Simske
Fort Collins, CO USA

for contributions to anti-counterfeiting and cyber-physical security

Dr. Hanumant Singh
Boston, MA USA

for development of localization and mapping techniques and autonomous systems for marine and polar applications

Dr. Brij Singh
West Fargo, ND USA

for applications of electric drive to off-road vehicles

Kumar Sivarajan
Bangalore, India

for leadership in optical networking

Prof. Florian Solzbacher
Salt Lake City, UT USA

for the development of tools enabling applied and translational neuroscience and neural engineering
Dr. Narayan Srinivasa  
San Jose, CA USA  

_for contributions to neural network and neuromorphic computing architectures, circuits and algorithms_

Dr. Anurag Srivastava  
Morgantown, WV USA  

_for contributions to electric grid resiliency_

Prof. Thomas Stieglitz  
Freiburg, Germany  

_for contributions to flexible micromachined neural interfaces and microimplants_

Dr. Mark Stiles  
Gaithersburg, MD USA  

_for contributions to spintronics devices and data storage_

Dr. Ad Stoffelen  
De Bilt, Netherlands  

_for contributions to satellite wind measurement missions_

Prof. S Sudarshan  
Mumbai, Maharashtra, India  

_for contributions to query processing and optimization in databases_
Dr. Nobuyuki Sugii
Tokyo, Japan

for contributions to fully depleted silicon-on-insulator technology

Dr. Richard Tabors
South Dartmouth, MA USA

for development of technologies for real-time locational pricing of electricity for efficient electric power markets

Dr. Chuan Seng Tan
Singapore, Singapore

for contributions to wafer bonding technology for 3D packaging and integration

Prof. Juan Tardos
Zaragoza, Spain

for contributions to simultaneous localization and mapping with visual sensors

Daniel Tazartes
West Hills, CA USA

for contributions to inertial sensors and navigation systems

Dr. Kiyohisa Terai
Yokohama, Kanagawa, Japan

for contribution to optical fiber sensors and electrical discharge applications

Rajeev Thakur
Lemont, IL USA

for contributions to high-performance interfaces for scalable computing systems
Prof. Yonghong Tian
Haidian, Beijing, China

for contributions to knowledge-based visual data analysis

Dr. Hanghang Tong
Champaign, IL USA

for contributions to graph mining

Gregg Trahey
Durham, NC USA

for contributions to speckle tracking and acoustic radiation force impulse imaging in medical ultrasound

Prof. Ivor Tsang
Sydney, New South Wales, Australia

for contributions to large-scale machine learning and transfer learning

Dr. Tetsuzo Ueda
Toyonaka-Shi, Osaka, Japan

for contributions to III-V compound semiconductor technologies

Shambhu Upadhyaya
Buffalo, NY USA

for contributions to the mitigation of insider attacks and malware in cyberspace

Elif Uysal
Ankara, Turkey

for pioneering contributions to energy-efficient and low latency communications
Dr. Mikhail Vaiman  
Los Angeles, CA USA  

_for contributions to methods and software for real-time analysis and control of electric power systems_  

Pietro Valdastri  
Leeds, United Kingdom  

_for contributions to medical capsule robots_  

Prof. Mikko Valkama  
Tampere, Finland  

_for contributions to physical layer signal processing in radio systems_  

Prof. Daniel Van Der Weide  
Madison, WI USA  

_for contributions to ultrafast terahertz electronics and biomedical applications of microwave technologies_  

Dr. Frank Van Diggelen  
Carmel By The Sea, CA USA  

_for contributions to assisted global navigation satellite systems for consumer applications_  

Prof. Marten Van Dijk  
Den Bosch, Netherlands  

_for contributions to secure processor design and encrypted computation_
Prof. Mayank Vatsa  
Jodhpur, Rajasthan, India

_for contributions to secure biometric recognition_

Ashok Veeraraghavan  
Houston, TX USA

_for contributions to computational photography and computer vision_

Dr. Peter Vetter  
Summit, NJ USA

_for leadership in broadband access technologies in advanced passive optical networks_

Dr. Emmanuel Vincent  
Villers-les-Nancy, France

_for contributions to audio source separation and challenge series methodology_

Dr. Sriram Vishwantath  
Austin, TX USA

_for contributions to information theory and coding for wireless communication systems_

Dr. Dimitris Visvikis  
Nantes Cedex, France

_for contributions to image reconstruction and analysis of positron emission tomography_

Prof. Richard Voyles  
West Lafayette, IN USA

_for leadership in the implementation of programs that foster robotics research and the robotics community_
Prof. Valeriy Vyatkin
Espoo, Finland

for contributions to software development methods and practices in industrial automation

Christian Waldschmidt
Ulm, Baden-Wuerttemberg, Germany

for contributions to millimeter wave automotive radar sensors

Dr. Jingdong Wang
Beijing, China

for contributions to visual content understanding and retrieval

Dr. Haifeng Wang
Beijing, China

for contributions and leadership in natural language processing and AI technologies

Jun Wang
Orlando, FL USA

for contributions to low power disk storage system design

Dr. Guiling Wang
Newark, NJ USA

for contributions to distributed algorithm design for sensor networks and vehicular networks

Dr. Yu Wang
Beijing, China

for contributions to domain specific accelerator design
Dr. Ping Wang
Toronto, ON Canada

for contributions to radio resource allocation and performance modeling of heterogeneous wireless networks

Qing Wang
University Park, PA USA

for contributions to polymer dielectrics for capacitive energy storage

Prof. Dongmei Wang
Atlanta, GA USA

for contributions to biomedical informatics and AI

Prof. Gregory Welch
Longwood, FL USA

for contributions to tracking methods in augmented reality applications

Matthew Wilkowski
Rockwall, TX USA

for contributions to integration and productization of magnetics for power electronics

Prof. Rebecca Willett
Chicago, IL USA

for contributions to the foundations of computational imaging and large-scale data science
Andrew Wolfe  
Los Gatos, CA USA

*for contributions in hardware code compression of embedded software power consumption analysis and optimization*

Prof. Lei Wu  
Hoboken, NJ USA

*for contributions to stochastic modeling and optimization of power systems and large interdependent infrastructures*

Prof. Cathy Wu  
Newark, DE USA

*for contributions to computational biology and data science*

Dr. Peter Wurman  
Acton, MA USA

*for contributions to computational auction, multiagent systems and robotics*

Dr. Xing Xie  
Beijing, China

*for contributions to spatial data mining and recommendation systems*

Prof. Le Xie  
College Station, TX USA

*for contributions to economic and secure operations of power systems and big data analytics*
Prof. Huili Grace Xing
Ithaca, NY USA

for contributions to GaN high-electron-mobility transistors

Prof. Li Xiong
Atlanta, GA USA

for contributions to privacy preserving and secure data sharing

Ying Xu
Athens, GA USA

for contributions to knowledge discovery from biological data

Dr. Ruqiang Yan
Xi'an, Shaanxi, China

for contributions to defect/fault detection and diagnosis of rotating machines

Dr. Zheng Yang
Beijing, China

for contributions to wireless localization and sensing

Dr. Guang-Hong Yang
Shenyang, Liaoning, China

for contributions to fault tolerant control of dynamical systems

Dr. Zhiping Yang
Campbell, CA USA

for contributions to signal and power integrity in high-performance data center electronics
Ruigang Yang  
Lexington, KY USA

for contributions to 3D computer vision and autonomous driving

Prof. Chunhua Yang  
Changsha, Hunan, China

for contributions in intelligent control and optimization of complex industrial processes

Prof. Jianhua Yang  
Los Angeles, CA USA

for contributions to resistive switching materials in memory and neuromorphic computing

Prof. Liangzhong Yao  
Wuhan, Hubei, China

for leadership in HVDC grid supporting integration of large wind farms

Dr. Xiaoning Ye  
Portland, OR USA

for contributions to high-speed interconnect design, optimization, and measurement methods

Prof. Lei Ying  
Ann Arbor, MI USA

for contributions to resource allocation in cloud computing systems and wireless networks

Prof. Euisik Yoon  
Ann Arbor, MI USA

for contributions to bio-microelectromechanical systems (BioMEMS) technologies for opto-electrical neural interfaces and microfluidic biochips
Prof. Mohamed Younis
Baltimore, MD USA

for contributions to protocols, architecture, and analysis of multi-hop wireless networks

Prof. Jiguo Yu
Jinan, Shandong, China

for contributions to data storage and processing in cloud and social environments

Prof. Sandro Zampieri
Padova, Italy

for contributions to distributed and networked control

Prof. Carl Zetterling
Kista, Sweden

for contributions to silicon carbide devices
Prof. Xiuyin Zhang
Guangzhou, Guangdong, China

for contributions to the design of filtering antennas

Dr. Jun Zhang
Sai Kung, Hong Kong

for contributions to dense wireless networks

Dr. Liang Zhang
Ottawa, ON Canada

for contributions to non-orthogonal multiplexing technology in terrestrial broadcast and broadband systems
Prof. Guoying Zhao
Oulu, Finland

for contributions to facial expression analysis and feature representation

Dr. Yefeng Zheng
Shenzhen, Guangdong, China

for contributions to machine learning for medical imaging

Zhangdui Zhong
Beijing, China

for contributions to theory, technology and development of mobile communications for railways

Prof. Anding Zhu
Dublin, Ireland

for contributions to behavioral modeling and digital predistortion of RF power amplifiers
Dr. Jiang Zhu
Cupertino, CA USA

for contributions to antenna design for wireless communications

Prof. Gil Zussman
New York, NY USA

for contributions to the design of wireless network systems