

## 2020 NEWLY ELEVATED FELLOWS

Hussein Abbass  
Canberra, ACT, Australia

*for contributions to evolutionary learning and optimization*

Michael Abramoff  
Iowa City, IA, U.S.A.

*for contributions to the application of artificial intelligence methods in diabetic retinopathy*

Paavo Alku  
Espoo, Finland

*for contributions to analysis, synthesis and quality improvement of speech signals*

Jaume Anguera Pros  
Catalunya, Spain

*for contributions to small multiband antennas for wireless telecommunication devices*

Alyssa Apsel  
Ithaca, NY, U.S.A.

*for contributions to radio frequency and optical communications circuits and systems*

Jose Arroyo-Sanchez  
Ciudad Real, Spain

*for contributions to generation scheduling for electricity markets*

Chadi Assi  
Montreal, QC, Canada

*for contributions to the methodology and application of machine learning and data mining*

Amir Avestimehr  
Rancho Palos Verdes, CA, U.S.A.

*for contributions to the analysis of communication and computation over wireless networks*

## 2020 NEWLY ELEVATED FELLOWS

Hari Balakrishnan  
Cambridge, MA, U.S.A.

*for contributions to the design and application of mobile sensing systems*

Andrew Bell  
Leeds, UK

*for contributions to piezoelectric science and engineering resulting in novel high temperature ultrasound transducers*

Adel Belouchrani  
EL Harrach, Algeria

*for contributions to blind source separation and to non-stationary signal and array processing*

Mohamed Benbouzid  
Brest, France

*for contributions to diagnosis and fault-tolerant control of electric machines and drives*

Vaughn Betz  
Toronto, ON, Canada

*for contributions to computer-aided design of field-programmable gate arrays*

William Bidermann  
San Diego, CA, U.S.A.

*for leadership in commercially successful image sensors and microprocessors*

Aude Billard  
Lausanne, Switzerland

*for contributions to robot task learning and programming by human demonstration*

Monica Blank  
Palo Alto, CA, U.S.A.

*for development of gyrotron oscillators and amplifiers*

## 2020 NEWLY ELEVATED FELLOWS

Alexandra Boltasseva  
West Lafayette, IN, U.S.A.

*for research on new materials for plasmonic and metamaterial nanophotonic devices*

Sukumar Brahma  
Clemson, SC, U.S.A.

*for contributions to power system protection with distributed and renewable generation*

Geoffrey Burr  
Cupertino, CA, U.S.A.

*for contributions to neuromorphic computing using non-volatile memories*

Lin Cai  
Victoria, BC, Canada

*for contributions to topology control of wireless networks*

Filippo Capolino  
Irvine, CA, U.S.A.

*for contributions to development of electromagnetic phenomena in metamaterials and periodic structures*

Walter Mark Carpenter  
Irving, TX, U.S.A.

*for leadership in standards development for power system protection*

Ramon Carvajal  
Sevilla, Spain

*for contributions to low-voltage and low-power CMOS analog circuit design*

Andrea Cavagnino  
Torino, Italy

*for contributions to multi-physics design and material characterization of electric machines*

## 2020 NEWLY ELEVATED FELLOWS

Ranveer Chandra  
Redmond, WA, U.S.A.

*for contributions to software-defined wireless networking technologies*

Ting-Chang Chang  
Kaohsiung, Taiwan

*for contributions to non-volatile memory and thin-film transistor technologies*

William Chappell  
Vienna, VA, U.S.A.

*for leadership in the development of reconfigurable radio frequency and microwave systems*

Baoquan Chen  
Beijing, China

*for contributions to spatial data visualization*

George Chen  
Southampton, UK

*for contributions to space charge measurement and interpretation for dielectric performance improvements*

Jiann-Fuh Chen  
Tainan, Taiwan

*for contributions to power electronics in sustainable energy and high power systems*

Lei Chen  
Hong Kong, Hong Kong

*for contributions to time series management and spatial crowdsourcing*

Shanzhi Chen  
Beijing, China

*for leadership in standardization of wireless mobile systems*

## 2020 NEWLY ELEVATED FELLOWS

Wei Chen  
Beijing, China

*for contributions to algorithmic development for influence maximization in social networks*

Xudong Chen  
Singapore, Singapore

*for contributions to optimization methods for electromagnetic inverse scattering*

Yingying Chen  
Holmdel, NJ, U.S.A.

*for contributions to mobile computing and mobile security*

Ka Wai Eric Cheng  
Kowloon, Hong Kong

*for contribution to electric vehicle technology and switched-capacitor power conversion*

Sen-Ching Cheung  
Lexington, KY, U.S.A.

*for contributions to multimedia data processing and their applications in autism interventions*

Chong-Yung Chi  
Hsinchu, Taiwan

*for contributions to convex analysis and optimization for blind source separation*

Jung-Chih Chiao  
Dallas, TX, U.S.A.

*for contributions to wireless and battery-less medical implants*

Pr Chidambaram  
San Diego, CA, U.S.A.

*for contributions to strain engineering in MOSFETs and to design-technology co-optimization*

## 2020 NEWLY ELEVATED FELLOWS

Sangyeun Cho  
Hwaseong-si, Korea

*for leadership and contributions to solid-state drive architectures and systems*

Wan Choi  
Daejeon, Korea

*for contributions to the analysis and design of multi-cell communication systems*

Chion Chui  
Hsinchu, Taiwan

*for contributions to high-mobility germanium metal-oxide-semiconductor devices*

Kukjin Chun  
Seoul, Korea

*for leadership in microelectromechanical systems technology development*

Maciej Ciesielski  
Amherst, MA, U.S.A.

*for contributions to logic synthesis and formal verification of arithmetic circuits*

Krzysztof Cios  
Richmond, VA, U.S.A.

*for contributions to data mining and machine learning*

Christopher Clifton  
West Lafayette, IN, U.S.A.

*for contributions to privacy protection in data analysis*

Carlos Cordeiro  
Portland, OR, U.S.A.

*for contributions to millimeter wave spectrum Wi-Fi radios*

## 2020 NEWLY ELEVATED FELLOWS

Keith Corzine  
Scotts Valley, CA, U.S.A.

*for contributions to topology and control of multilevel converters*

Thomas Crowe  
Charlottesville, VA, U.S.A.

*for leadership in the development of terahertz devices and instrumentation*

Carolina Cruz-Neira  
Little Rock, AR, U.S.A.

*for contributions to virtual reality*

Ravinder Dahiya  
Glasgow, UK

*for contributions to tactile sensing*

Gautam Das  
Arlington, TX, U.S.A.

*for contributions to search and ranking in databases and deep web querying*

Jack Davidson  
Charlottesville, VA, U.S.A.

*for contributions to compilers, computer security and computer science education*

Jose de la Rosa  
Sevilla, Spain

*for contributions to delta-sigma modulators*

Barbara De Salvo  
Menlo Park, CA, U.S.A.

*for contributions to device physics of nonvolatile embedded and stand-alone memories*

## 2020 NEWLY ELEVATED FELLOWS

Venkata Raman Dinavahi  
Edmonton, AB, Canada

*for contributions to real-time simulation of power systems with embedded power electronic converters*

Zhiguo Ding  
Manchester, UK

*for contributions to non-orthogonal multiple access and energy harvesting communication*

Marco Di Renzo  
Gif sur Yvette, France

*for contributions to spatial modulation and to performance evaluation of wireless networks*

Ivan Djordjevic  
Tucson, AZ, U.S.A.

*for contributions to physical-layer optical communications*

Octavia Dobre  
St. John's, NL, Canada

*for contributions to the theory and practice of signal intelligence and emerging wireless technologies*

Shlomi Dolev  
Beer-Sheva, Israel

*for contributions to distributed computing and self-stabilization*

Liang Dong  
Clemson, SC, U.S.A.

*for contributions to the development of photosensitive optical fibers for fiber amplifiers*

Xiaojiang Du  
Philadelphia, PA, U.S.A.

*for contributions to wireless security*



## 2020 NEWLY ELEVATED FELLOWS

Ashutosh Dutta  
Bridgewater, NJ, U.S.A.

*for leadership in mobility management and security monitoring in mobile networks*

Touradj Ebrahimi  
Lausanne, Switzerland

*for contributions to visual information representation and assessment of quality of experience in multimedia*

Rudolf Eigenmann  
Newark, DE, U.S.A.

*for contributions to compilers for high-performance computing*

Stanislav Emelianov  
Atlanta, GA, U.S.A.

*for contributions to ultrasound elasticity and photoacoustic imaging*

Jerome Faist  
Zurich, Switzerland

*for contributions to quantum cascade lasers and infrared QCLs*

Sina Farsiu  
Durham, NC, U.S.A.

*for contributions to multi-frame super resolution and ophthalmic image processing*

Antonella Ferrara  
Pavia, Italy

*for contributions to sliding mode control theory*

Ian Foster  
Chicago, IL, U.S.A.

*for contributions to grid computing and data transport infrastructures*

## 2020 NEWLY ELEVATED FELLOWS

Edward Frank  
Park City, UT, U.S.A.

*for leadership in commercialization of wireless solutions for mobile computing and communications*

Richard Fujimoto  
Atlanta, GA, U.S.A.

*for contributions to parallel and distributed discrete event simulation*

Feifei Gao  
Beijing, China

*for contributions to channel estimation and signal processing for wireless communications*

Andrea Garulli  
Siena, Italy

*for contributions to set membership identification and robust analysis of uncertain systems*

Johannes Gehrke  
Bellevue, WA, U.S.A.

*for contributions to data mining and data management systems*

Kurt Gibble  
University Park, PA, U.S.A.

*for contributions to improving the accuracy of atomic fountain clocks*

Sonja Glavaski  
Potomac, MD, U.S.A.

*for leadership in energy systems*

Edward Godshalk  
Newberg, OR, U.S.A.

*for development of microwave on-wafer probing and measurement techniques*

## 2020 NEWLY ELEVATED FELLOWS

Kristen Grauman  
Austin, TX, U.S.A.

*for contributions to computer vision for visual recognition and search*

Guofei Gu  
College Station, TX, U.S.A.

*for contributions to malware detection and security of next generation networks*

Song Guo  
Kowloon, Hong Kong

*for contributions to high performance and resilient distributed computing*

Yifan Guo  
Irvine, CA, U.S.A.

*for leadership in interconnect technologies for electronics packaging and reliability analysis*

Mool Gupta  
Keswick, VA, U.S.A.

*for contributions to laser material interactions*

Satyandra Gupta  
Los Angeles, CA, U.S.A.

*for contributions to the development of decision making tools for manufacturing automation*

Oliver Gutfleisch  
Darmstadt, Germany

*for contributions to the development of magnetic materials for sustainable energy applications*

Christoforos Hadjicostis  
Nicosia, Cyprus

*for contributions to distributed and discrete event systems*

## 2020 NEWLY ELEVATED FELLOWS

Reinhold Haeb-Umbach  
Paderborn, Germany

*for contributions to robustness of automatic speech recognition*

Mohammad Hajiaghayi  
College Park, MD, U.S.A.

*for contributions to algorithmic graph theory and to algorithmic game theory*

Mary Hall  
Salt Lake City, UT, U.S.A.

*for contributions to compiler optimization and performance tuning*

Tarek Hamel  
Sophia Antipolis, France

*for contributions to the field of aerial robotics*

John Harley  
Peninsula, OH, U.S.A.

*for development of monitoring and pump bearing systems for power transformers*

Mark Hasegawa-Johnson  
Urbana, IL, U.S.A.

*for contributions to speech processing of under-resourced languages*

Jinghan He  
Beijing, China

*for contributions to the protection of substations and traction power*

Aaron Hertzmann  
San Francisco, CA, U.S.A.

*for contributions to computer graphics and animation*

## 2020 NEWLY ELEVATED FELLOWS

Alan Hevner  
Tampa, FL, U.S.A.

*for contributions to design science and software engineering*

Sandra Hirche  
Munich, Germany

*for contributions to human-machine interaction and networked control*

Markus Hofmann  
Middletown, NJ, U.S.A.

*for leadership in development of content distribution networks*

Daesik Hong  
Seoul, Korea

*for contributions to wireless and cellular communication technologies*

Rose Hu  
Logan, UT, U.S.A.

*for contributions to design and analysis of mobile wireless communications systems*

Zhenjiang Hu  
Tokyo, Japan

*for contributions to robust software development*

Zhongsheng Hou  
Beijing, China

*for contributions to data-driven learning and control with applications in transportation systems*

Victor Huang  
Cupertino, CA, U.S.A.

*for leadership in the development of microprocessors in mobility products*

## 2020 NEWLY ELEVATED FELLOWS

Yo-Ping Huang  
Tapei, Taiwan

*for contribution to fuzzy and grey modeling in intelligent healthcare systems design*

Muhammad Hussain  
Austin, TX, U.S.A.

*for contributions to flexible and stretchable electronic circuits*

Auke Ijspeert  
Lausanne, Switzerland

*for contributions to biorobotics for locomotion*

Benjamin Iniguez  
Catalonia, Spain

*for contributions to physics-based compact models of semiconductor devices*

Akira Inoue  
Kobe City, Japan

*for development of inverse class-F power amplifiers for mobile phones*

Mohammad Saiful Islam  
Davis, CA, U.S.A.

*for development of sensors and ultra-fast photodetectors*

Jan Izykowski  
Wroclaw, Poland

*for contributions to fault localization in power lines*

Philippe Jacquet  
Buc, France

*for contributions to wireless protocols and communication networks*

## 2020 NEWLY ELEVATED FELLOWS

Weijia Jia  
Macau, Macao

*for contributions to optimal network routing and deployment*

Bin Jiang  
Nanjing, China

*for contributions to intelligent fault diagnosis and fault-tolerant control*

Tianzi Jiang  
Beijing, China

*for contributions to neuroimaging techniques*

Masahiko Jinno  
Kagawa, Japan

*for contributions to elastic optical networks and C- and L-band transmission systems*

Jacob Jones  
Raleigh, NC, U.S.A.

*for development of X-ray scattering methods to understand electromechanical properties of ferroelectrics*

Robert Jopson  
Holmdel, NJ, U.S.A.

*for contributions to the mitigation of polarization effects in optically-amplified lightwave systems*

Eduard Jorswieck  
Braunschweig, Germany

*for contributions to resource allocation in wireless interference networks*

Emil Jovanov  
Huntsville, AL, U.S.A.

*for contributions to wearable health monitoring*

## 2020 NEWLY ELEVATED FELLOWS

Markku Juntti  
Oulu, Finland

*for contributions to multiuser and multiantenna communications*

William Kaiser  
Los Angeles, CA, U.S.A.

*for contributions to wireless sensor network technology and its applications to advancing healthcare*

Akihiko Kandori  
Tokyo, Japan

*for contributions to superconductive magnetocardiography and diagnostic technology*

Fakhri Karray  
Waterloo, ON, Canada

*for contributions to intelligent systems*

Ramesh Karri  
Brooklyn, NY, U.S.A.

*for contributions to and leadership in trustworthy hardware*

Beth Keser  
San Diego, CA, U.S.A.

*for contributions to electronic packaging technologies*

Eric Klumperink  
Enschede, Netherlands

*for contributions to thermal noise cancelling and software defined radio architecture*

Sven Koenig  
Los Angeles, CA, U.S.A.

*for contributions to search algorithms and multi-agent coordination*



## 2020 NEWLY ELEVATED FELLOWS

Jeff Krolik  
Durham, NC, U.S.A.

*for contributions to statistical signal and sensor array processing for radar and sonar*

Martin Kuball  
Bristol, UK

*for contributions to Raman thermography in semiconductor devices*

Thomas Kuerner  
Braunschweig, Germany

*for contributions to terahertz data communication*

Hak-Keung Lam  
London, UK

*for contributions to analysis and design of fuzzy model-based control systems*

Gerard Ledwich  
Brisbane, Australia

*for development of control of power systems and power electronics*

Kevin Lee  
Menomonee Falls, WI, U.S.A.

*for contributions to power quality for adjustable speed drives*

Bradley Lehman  
Boston, MA, U.S.A.

*for contributions to high quality LED lighting and modeling and control of DC-DC converters*

Chris Leighton  
Minneapolis, MN, U.S.A.

*for contributions to the understanding of magnetic oxides, interfaces, and nanostructure*

## 2020 NEWLY ELEVATED FELLOWS

Jia Li  
University Park, PA, U.S.A.

*for contributions to real-time automatic image annotation and image retrieval*

Mo Li  
Singapore, Singapore

*for development of wireless and networked sensing systems*

Shihua Li  
Nanjing, China

*for contributions to the theory of mismatched disturbance rejection in industrial systems*

Xiaodong Li  
Victoria, Australia

*for contributions to large-scale and particle swarm optimization*

Xiaofeng Li  
Shanghai, China

*for contributions to the application of synthetic aperture radar for ocean remote sensing*

Yun Li  
Glasgow, UK

*for application of computational intelligence to system design and control*

Yun Wei Li  
Edmonton, AB, Canada

*for contributions to power electronics converters in microgrids and industrial drives*

Gong-Ru Lin  
Taipei, Taiwan

*for contributions to ultrafast fiber lasers and highspeed laser diodes for optical communications*

## 2020 NEWLY ELEVATED FELLOWS

Wallace Lin  
San Jose, CA, U.S.A.

*for contributions to understanding transistor charging mechanisms*

Richard Lippmann  
Wayland, MA, U.S.A.

*for contributions to neural networks and assessment of computer security systems*

Po-Tsun Liu  
Hsinchu, Taiwan

*for contributions to thin film transistor technologies*

Xue Liu  
Montreal, QC, Canada

*for contributions to power and performance management of data centers and networked servers*

Nuria Llombart Juan  
Delft, Netherlands

*for contributions to millimeter and submillimeter wave quasi-optical antennas*

Jianbo Lu  
Northville, MI, U.S.A.

*for contributions to the control of automotive systems with applications in vehicle safety and performance*

Kartikeyan Machavaram  
Roorkee, India

*for contributions to high-power millimeter wave and terahertz sources*

Yiannos Manoli  
Freiburg, Germany

*for contributions to the design of integrated analog-to-digital interface circuits and energy harvesting systems*

## 2020 NEWLY ELEVATED FELLOWS

Marco Martorella  
Pisa, Italy

*for contributions to multi-static inverse synthetic aperture radars*

Ujjwal Maulik  
Kolkata, India

*for development of algorithms in evolutionary clustering and bioinformatics*

James McDowall  
Wallingford, CT, U.S.A.

*for leadership in stationary battery standards and energy storage industry*

Claudio Melchiorri  
Bologna, Italy

*for design and control of robot hands and telemanipulation systems*

Michael Miller  
Baltimore, MD, U.S.A.

*for contributions to medical imaging, brain mapping, and computational anatomy*

Durgamadhab Misra  
Newark, NJ, U.S.A.

*for contributions to the reliability of CMOS gate stacks with high-k dielectrics*

Massimo Mitolo  
Irvine, CA, U.S.A.

*for contributions to the electrical safety of low-voltage systems*

Michael Mitzenmacher  
Cambridge, MA, U.S.A.

*for contributions to coding theory and networking algorithms*

## 2020 NEWLY ELEVATED FELLOWS

Amir-Hamed Mohsenian-Rad  
Riverside, CA, U.S.A.

*for contributions to optimal resource management in wireless networks and the smart grid*

Mohamed Mokbel  
Minneapolis, MN, U.S.A.

*for contributions to building spatially- and privacy-aware systems*

Guido Montorsi  
Torino, Italy

*for contributions to error-correcting codes and iterative decoding*

Mutsuhiro Mori  
Mito, Japan

*for contributions to high voltage insulated gate bipolar transistors for traction and high voltage systems*

Kirsten Morris  
Waterloo, ON, Canada

*for contributions to control and estimator design for infinite-dimensional systems*

Yasamin Mostofi  
Santa Barbara, CA, U.S.A.

*for contributions to control and communications co-optimization in mobile sensor networks*

Meinard Mueller  
Erlangen, Germany

*for contributions to music signal processing*

Robert Murphy  
Pittsburgh, PA, U.S.A.

*for contributions to machine learning algorithms for biological images*

## 2020 NEWLY ELEVATED FELLOWS

Luiz Augusto Nobrega Barroso  
Rio de Janeiro, Brazil

*for leadership in analytical methods for power system economics and regulation*

Saeid Nahavandi  
Victoria, Australia

*for contributions to haptically-enabled robotic systems*

Marc Najork  
Palo Alto, CA, U.S.A.

*for contributions to web crawling and web data processing*

Patrick Naylor  
London, UK

*for contributions to signal processing for speech dereverberation and analysis*

Moshe Nazarathy  
Haifa, Israel

*for contributions to optical systems and analog fiber-optic transmission*

Bich-Yen Nguyen  
Austin, TX, U.S.A.

*for contributions to silicon on insulator technology*

Shouleh Nikzad  
Pasadena, CA, U.S.A.

*for contributions to ultraviolet detectors for space applications*

Vasilis Ntziachristos  
Munich, Germany

*for contributions to optoacoustic imaging and intraoperative fluorescence imaging*

## 2020 NEWLY ELEVATED FELLOWS

Marcia O'Malley  
Houston, TX, U.S.A.

*for contributions to rehabilitation robotics and haptic systems*

Burak Ozpineci  
Oak Ridge, TN, U.S.A.

*for contributions to transportation electrification and wireless charging of electric vehicles*

Partha Pande  
Pullman, WA, U.S.A.

*for contributions to network-on-chip architectures for manycore computing*

Panagiotis Papadimitratos  
Stockholm, Sweden

*for contributions to wireless mobile network security and privacy*

Byung-Gook Park  
Seoul, Korea

*for contributions to charge trap flash memory and multiple patterning technology*

Chul Soon Park  
Daejeon, Korea

*for development of low power millimeter-wave circuits and packages*

Mugen Peng  
Beijing, China

*for contributions to radio resource management of wireless networks*

Ana Perez-Neira  
Barcelona, Spain

*for contributions to signal processing for satellite communications and systems*

## 2020 NEWLY ELEVATED FELLOWS

Michael Perrott  
Nashua, NH, U.S.A.

*for contributions to phase-locked loop integrated circuits*

Ullrich Pfeiffer  
Wuppertal, Germany

*for development of silicon-based millimeter-wave and terahertz circuits and systems*

Pierre Pinson  
Lyngby, Denmark

*for contributions to wind forecasting techniques in renewable energy integration*

Pierluigi Poggiolini  
Torino, Italy

*for contributions to modeling of nonlinear propagation in coherent fiber-optic systems*

Sara Pozzi  
Ann Arbor, MI, U.S.A.

*for contributions to neutron detection techniques and neutron transport Monte Carlo methods*

Maria Prandini  
Milano, Italy

*for contributions to stochastic, hybrid and distributed control systems theory*

Dennis Prather  
Newark, DE, U.S.A.

*for contributions to diffractive optical systems*

Markus Pueschel  
Zurich, Switzerland

*for contributions to the implementation of signal processing techniques*



## 2020 NEWLY ELEVATED FELLOWS

Wei Qiao  
Lincoln, NE, U.S.A.

*for contributions to condition monitoring and control of power electronics interfaced rotating machine systems*

Daniel Rabideau  
Lexington, MA, U.S.A.

*for contributions to radar architectures and technologies*

Hesham Rakha  
Blacksburg, VA, U.S.A.

*for contributions to optimization, modeling and assessment of transportation systems*

Hong Rao  
Guangzhou, China

*for leadership and contributions to the design and application of HVDC in AC/DC grids*

Joseph Reinhardt  
Iowa City, IA, U.S.A.

*for contributions to medical image processing and analysis*

Christ Richmond  
Tempe, AZ, U.S.A.

*for contributions to adaptive array processing algorithms*

George Ridley  
Rugby, UK

*for contribution to stator core insulation condition analysis in large hydroelectric generators*

Jae-Sung Rieh  
Seoul, Korea

*for contributions to silicon-germanium integrated circuits for wireless communications*

## 2020 NEWLY ELEVATED FELLOWS

Chuntaek Rim  
Seoul, Korea

*for contributions to wireless power transfer for electric vehicles and mobile devices*

Steven Ringel  
Columbus, OH, U.S.A.

*for contributions to compound semiconductor photovoltaics*

Joel Rodrigues  
Santa Rita de Sapucaí, Brazil

*for contributions to Internet of Things and vehicular communications*

Punam Saha  
Iowa City, IA, U.S.A.

*for contributions to quantitative bone microstructural imaging and analysis*

Vivek Sarkar  
Atlanta, GA, U.S.A.

*for contributions to compiler technologies for high-performance computing*

William Scanlon  
Larne, UK

*for contributions to antenna design for wearable and implantable applications*

Manfred Schindler  
Newtonville, MA, USA

*for development in microwave switch technology for radar and wireless communication systems*

Kevin Schneider  
Seattle, WA, U.S.A.

*for contributions to the development of open-access tools for distribution system analysis*

## 2020 NEWLY ELEVATED FELLOWS

Tanja Schultz  
Bremen, Germany

*for contributions to multilingual speech recognition and biosignal processing*

Sirish Shah  
Edmonton, ON, Canada

*for contributions to process and performance monitoring*

Vladimir Shiltsev  
Batavia, IL, U.S.A.

*for development of electron lenses and contributions to accelerator technology and beam physics*

Nabil Simaan  
Nashville, TN, U.S.A.

*for contributions to dexterous continuum robotics for surgery*

Dimitra Simeonidou  
Bristol, UK

*for contributions to optical networking systems and applications*

Evgenia Smirni  
Williamsburg, VA, U.S.A.

*for contributions to modeling and performance forecasting of complex systems*

Joshua Smith  
Seattle, WA, U.S.A.

*for contributions to far-and-near-field wireless power, backscatter communication, and electric field sensing*

Alex Snoeren  
La Jolla, CA, U.S.A.

*for contributions to management and security of networked systems*

## 2020 NEWLY ELEVATED FELLOWS

Yong Song  
Chongqing, China

*for contributions to neural adaptive and fault-tolerant control techniques*

Sarah Spurgeon  
Canterbury, UK

*for contributions to variable structure control and estimation*

Dipti Srinivasan  
Singapore, Singapore

*for contributions to computational intelligence for Smart Grid*

Gookwon Suh  
Ithaca, NY, U.S.A.

*for contributions to the development of secure hardware circuits and processors*

Nian-Xiang Sun  
Boston, MA, U.S.A.

*for contributions to integrated magnetic and magnetoelectric materials and devices*

Karthikeyan Sundaresan  
Princeton, NJ, U.S.A.

*for contributions to algorithms for mobile computing*

Yuji Suzuki  
Tokyo, Japan

*for contributions to privacy protection in data analysis*

Osamu Tabata  
Kyoto, Japan

*for contributions to the development and commercialization of micro electro mechanical systems*

## 2020 NEWLY ELEVATED FELLOWS

Atsuo Takanishi  
Tokyo, Japan

*for contribution to the development of humanoid robots*

Hwa Yaw Tam  
Kowloon, Hong Kong

*for contributions to fiber sensing networks for railway predictive maintenance*

Bruce Terris  
Sunnyvale, CA, U.S.A.

*for contributions to high density magnetic recording and spintronic materials*

Ravi Todi  
San Jose, CA, U.S.A.

*for contributions to innovative design and commercialization of high performance eDRAM*

Joel Tropp  
Pasadena, CA, U.S.A.

*for contributions to sparse signal processing*

Gokhan Tur  
Los Altos, CA, U.S.A.

*for leadership in spoken language understanding and applications to virtual personal assistant products*

Pavan V. Hanumolu  
Urbana, IL, U.S.A.

*for contributions to the design of mixed-signal integrated circuits*

Shahrokh Valaee  
Toronto, ON, Canada

*for contributions to localization of wireless nodes*

## 2020 NEWLY ELEVATED FELLOWS

Dimitri Van De Ville  
Geneva, Switzerland

*for contribution to image processing for computational brain imaging*

Peter Varman  
Houston, TX, U.S.A.

*for contributions to input/output scheduling algorithms for storage systems*

Malathi Veeraraghavan  
Charlottesville, VA, U.S.A.

*for contributions to control-plane architectures, signal protocols and hybrid networks*

Narasimham Vempati  
Chandler, AZ, U.S.A.

*for contributions to power system state estimation and transmission congestion markets*

Mahinda Vilathgamuwa  
Brisbane, Australia

*for contributions to power quality and grid storage*

Ba-Ngu Vo  
Perth, Australia

*for contributions to the theory of multiple object tracking and estimation*

Aaron Wagner  
Ithaca, NY, U.S.A.

*for contributions to distributed data compression*

Haining Wang  
Newark, DE, U.S.A.

*for contributions to network and cloud security*

## 2020 NEWLY ELEVATED FELLOWS

Tza-Huei Wang  
Baltimore, MD, U.S.A.

*for contributions to micro-and-nano-technologies for biomedical applications*

Yunhong Wang  
Beijing, China

*for contributions to iris and face recognition*

John Watson  
Aberdeen, UK

*for contributions to the development of submersible holography and in-situ imaging of marine organisms*

Yonggang Wen  
Singapore, Singapore

*for contributions to cloud systems for multimedia signal processing and communications*

Richard Wesel  
Los Angeles, CA, U.S.A.

*for contributions to channel coding and reliable communication*

Joerg Widmer  
Madrid, Spain

*for contributions to wireless networking and millimeter-wave communications*

Sheldon Williamson  
Oshawa, ON, Canada

*for contributions to electric energy storage systems for transportation electrification*

Steve Wozniak  
Los Gatos, CA, U.S.A.

*for development of personal computers*

## 2020 NEWLY ELEVATED FELLOWS

Hongyi Wu  
Norfolk, VA, U.S.A.

*for contributions to resilient mobile computing systems*

Ligang Wu  
Harbin, China

*for contributions to sliding mode control and robust filtering*

Pengfei Xia  
San Diego, CA, U.S.A.

*for contributions to multi-input multi-output millimeter wave wireless communications*

Yang Xiang  
Melbourne, Australia

*for contributions to network and system security*

Yang Xiao  
Tuscaloosa, AL, U.S.A.

*for contributions to wireless medium access control*

Jiang Xie  
Charlotte, NC, U.S.A.

*for contributions to mobility and resource management of wireless networks*

Guoliang Xing  
Hong Kong, Hong Kong

*for contributions to sensor networks and low-power wireless networks*

Mengdao Xing  
Xian, China

*for contributions to radar imaging and motion compensation algorithms*



## 2020 NEWLY ELEVATED FELLOWS

Hui Xiong  
Beijing, China

*for contributions to data mining and mobile computing*

Huazhong Yang  
Beijing, China

*for low-power circuit techniques for sensor applications and design automation*

Lan Yang  
Saint Louis, MO, U.S.A.

*for contributions to optical sensing and non-Hermitian photonics*

Laurence Tianruo Yang  
Antigonish, NS, Canada

*for contributions to modeling and design for cyber-physical-social systems*

Shiwen Yang  
Chengdu, China

*for development of time-modulated antenna arrays*

Jieping Ye  
Ann Arbor, MI, U.S.A.

*for contributions to the methodology and application of machine learning and data mining*

Jong Chul Ye  
Daejeon, Korea

*for contributions to signal processing and machine learning for bio-medical imaging*

Jianjun Yu  
Basking Ridge, NJ, U.S.A.

*for contributions to high-performance optical fiber communication systems*

## 2020 NEWLY ELEVATED FELLOWS

Zeev Zalevsky  
Ramat-Gan, Israel

*for contributions to super-resolved imaging and remote biomedical sensing*

Masoud Zargari  
Irvine, CA, U.S.A.

*for contributions to the development of CMOS radio-frequency integrated circuits*

Yonghong Zeng  
Singapore, Singapore

*for contributions to spectrum sensing and medium access control in cognitive radio*

Zhigang Zeng  
Wuhan, China

*for contributions to analysis and synthesis of neurodynamic systems*

Bing Zhang  
Beijing, China

*for contributions to hyperspectral image acquisition and processing*

Lei Zhang  
Beijing, China

*for contributions to large-scale visual recognition and multimedia information retrieval*

Tong Zhang  
Clearwater Bay, Hong Kong

*for contributions to machine learning algorithms*

Tong Zhang  
Albany, NY, U.S.A.

*for contributions to system design and VLSI implementation for data storage*

## 2020 NEWLY ELEVATED FELLOWS

Xiao-Ping Zhang  
Birmingham, UK

*for contributions to modeling and control of high-voltage DC and AC transmission systems*

Xiaowu Zhang  
Singapore, Singapore

*for contributions to three-dimensional integrated circuits*

Yan Zhang  
Bærum, Norway

*for contributions to resource management in wireless networks*

Yi Zhang  
Winnipeg, MB, Canada

*for leadership in the development of real time digital simulation in power systems*

Yingjun Zhang  
Hong Kong, Hong Kong

*for contributions to resource allocation and optimization in wireless communications*

Zhongfei Zhang  
Binghamton, NY, U.S.A.

*for contributions to multimodal data content understanding and mining*

Dongbin Zhao  
Beijing, China

*for contributions to adaptive dynamic programming and reinforcement learning*

Jun Zhao  
Shenyang, China

*for contributions to switched systems and dissipativity theory*

## 2020 NEWLY ELEVATED FELLOWS

Bowen Zhou  
Ossining, NY, U.S.A.

*for leadership in human language technologies*

Shaohua Zhou  
Princeton, NJ, U.S.A.

*for contributions to image analysis for medical imaging and face recognition*