IEEE Fellows Elevated as of January 2021

Nominee Details	Active Societies	Evaluating Society/ Council
Stefano Coraluppi ***for contributions to multi-sensor multi-target tracking***	AES	AES
Michael Griffin ***for leadership in space infrastructure and Space Shuttle, International Space Station, Hubble and other missions***		AES
Robert Shin ***for leadership in electromagnetic modeling of radar systems and in micorwave remote sensing***	GRS AP E AES	AES
Birsen Yazici ***for contributions to synthetic aperture radar and passive imaging***	SP AES SYS SEN GRS IT	AES
Yi Huang ***for contributions to rectenna technology***	MTT AP	AP
Vitaliy Lomakin ***for contributions to theoretical and computational electromagnetics***	MAG AP	AP
Hanyang Wang ***for contributions to mobile terminal antennas***	AP	AP

Geyi Wen ***for contributions to antenna quality factor***	AP	AP
Zhinong Ying ***for contributions to mobile terminal antenna technology***	VT AP	AP
Tarek Abdelzaher ***for contributions to cyber-physical systems and real-time computing***	C	C
Rajeev Balasubramonian ***for contributions to in-memory computation and memory interface design***	C	C
David Basin ***for contributions to formal methods for information security***		C
Kirk Cameron ***for contributions to measurement and management of energy in high-performance-computing systems***	C	C
Calin Cascaval ***for contributions to programming models for parallel machines and heterogeneous mobile devices***		C
Bruce Croft ***for contributions to information retrieval***		C
Bronis De Supinski ***for leadership in the design and use of large-scale computing systems***	C	C
Sebastian Elbaum ***for contributions of testing techniques for evolving systems***		C

Natalie Enrightjerger ***for contributions to networks-on-chip for many-core architectures***	C	C
Michael Ernst ***for contributions to software analysis, testing, and verification***		C
Evgeniy Gabrilovich ***for contributions to web information retrieval technology***		C
Yolanda Gil ***for contributions to geoscience and scientific discovery with intelligent workflow systems***		C
Wolfgang Heidrich ***for contributions to high dynamic range display and computational cameras***	C SP	C
Stephen Hodges ***for leadership in pervasive computing systems***	C	C
Bruce Jacob ***for contributions to computer memory design and analysis***	C	C
Daniel Jimenez ***for contributions to neural branch prediction in microprocessor research and design***	C	C
Stefanos Kaxiras ***for contributions to high-performance and power-efficient memory hierarchies***	C	C
Kimberly Keeton ***for contributions to storage and memory systems***	C	C

Craig Knoblock ***for contributions to semantic data integration techniques***	C	C
Svetlana Lazebnik ***for contributions to computer vision***	C	C
Kyoung Mu Lee ***for contributions to image restoration and visual tracking***	SP C	C
Wenke Lee ***for contributions to machine-learning-based approaches to intrusion and botnet detection***	C	C
Ninghui Li ***for contributions to data privacy and security***	C	C
Shixia Liu ***for contributions to visual text analysis and visual model analysis***	C	C
Le Lu ***for contributions to machine learning for cancer detection and diagnosis***	C SP	C
Jose Martinez ***for contributions to adaptable multiprocessor computer architectures***	C	C
Sharad Mehrotra ***for contributions to the fields of data management and multimedia information retrieval***		C
Prabhat Mishra ***for contributions to system-on-chip validation and design automation of embedded systems***		C

Jose Moreira ***for advances in high performance computing systems software and processor design***	C	C
Katherine Morse ***for contributions to standardization of simulation technologies***		C
Andreas Moshovos ***for contributions to out-of-order processor microarchitecture and multiprocessor memory systems***	C	C
Alessandro Orso ***for contributions to software testing and debugging***	C	C
John Owens ***for contributions to heterogeneous parallel computing***		C
Pietro Perona ***for contributions to visual recognition algorithms and datasets***		C
Louiqa Raschid ***for contributions to data management, information integration and data mining***	C	C
Martin Reddy ***for contributions to conversational artificial intelligence***	C	C
Grigore Rosu ***for contributions to runtime verification and programming language semantics***	C	C
Dieter Schmalstieg ***for contributions to augmented reality***		C

Alla Sheffer ***for contributions to mesh parameterization and hexahedral meshing***		C
Willy Susilo ***for contributions to cloud computing security***	C	C
Jie Tang ***for contributions to knowledge discovery from data and social network mining***		C
My Thai ***for contributions to modeling, design, and optimization of networked systems***		C
Jaideep Vaidya ***for contributions to privacy protection in data analytics and access control management***	SYS C COM SMC	C
Wil Van Der Aalst ***for contributions to process mining and workflow processes***	CIS C	C
Xiaorui Wang ***for contributions to power management of data center servers and embedded systems***	C	C
Jingyi Yu ***for contributions to theoretical analysis, algorithms and systems for computational photography and computer vision***	C	C
Lintao Zhang ***for contributions to computer-aided verification with efficient Boolean satisfiability solvers***	C	C

Yu Zheng ***for contributions to spatio-temporal data mining and urban computing***		C
Thomas Zimmermann ***for contributions to data science in software engineering, research and practice***	C	C
Jianfei Cai ***for contributions to multimedia transmission and content analysis***	CAS SP	CAS
Francis Lau ***for contributions to analysis of chaotic communications systems and low-density parity-check code design***	CAS COM IT	CAS
Houqiang Li ***for contributions to video coding and multimedia content analysis***	CAS C CIS SP	CAS
Jun Ohta ***for contributions to CMOS image sensors and devices for biomedical applications***	CAS SEN SSC EMB ED	CAS
Guangming Shi ***for contributions to image representation and image reconstruction***	CAS SP	CAS
Meng Wang ***for contributions to multimedia content analysis and retrieval***	SP CAS	CAS
Junsong Yuan ***for contributions to human behavior understanding and video analytics***	CAS C SP	CAS

Huang De Shuang ***for contributions to neural networks for pattern recognition and bioinformatics***	CIS	CIS
Joao Gama ***for contributions to mining data streams***		CIS
Jonathan Garibaldi ***for contributions to computational intelligence techniques in data analysis and decision support***	CIS	CIS
Lise Getoor ***for contributions to machine learning and reasoning under uncertainty***		CIS
Xiaofeng Liao ***for contributions to neurodynamic systems and chaotic cryptography***	C CIS	CIS
Jose Lozano ***for contributions to the estimation of distribution algorithms in evolutionary computation***	CIS	CIS
Bao-liang Lu ***for contributions to artificial neural networks and affective brain-computer interfaces***	CIS EMB	CIS
Vincent Tseng ***for contributions to utility pattern mining and biomedical applications***	CIS C	CIS
Ganesh Venayagamoorthy ***for contributions to the application of artificial intelligence to power systems***	PEL IA CIS PE SMC C IE	CIS

Mehdi Bennis ***for contributions to resource optimization in heterogeneous and low-latency wireless networks***	COM	COM
Danijela Cabric ***for contributions to theory and practice of spectrum sensing and cognitive radio systems***	COM CAS SP	COM
Chan-byoung Chae ***for contributions to MIMO design and prototypes for emerging communication systems***	VT COM IT SP	COM
Min Chen ***for contributions to data-driven communication, caching, and computing***	SEN SYS COM	COM
I Chih-lin ***for leadership in wireless mobile networks***	COM	COM
Filip De Turck ***for contributions to network resource management and adaptive service delivery***	COM C	COM
Jaafar M.h. Elmirghani ***for contributions to energy-efficient communications***	COM	COM
Matthias Grossglauser ***for contributions to the modeling and analysis of network traffic and data***	COM C	COM
Ismail Guvenc ***for contributions to heterogeneous wireless networks and wireless localization***	COM	COM

Kaibin Huang ***for contributions to wirelessly powered communications and multi-antenna communications***	COM	COM
Byoung-hoon Kim ***for contributions to development and standardization of mobile communication technologies***	COM	COM
Wonjun Lee ***for contributions to multiple access and resource allocation in wireless networks***	COM C CT VT RFID	COM
Rongxing Lu ***for contributions to security and privacy in vehicular communications***	COM VT IE	COM
Huadong Ma ***for contributions to multimedia sensor networks***	CAS COM C	COM
Athina Markopoulou ***for contributions to network coding systems and network measurement***	COM	COM
Marco Mellia ***for contributions to Internet traffic analysis***	COM	COM
Wing Kwan Ng ***for contributions to resource allocation for wireless communication networks***	COM VT	COM
Gurudatta Parulkar ***for contributions to improving the architecture of the internet and software defined networking***	COM	COM

Chiara Petrioli ***for contributions to wireless and underwater networks***		COM
Dario Pompili ***for contributions to underwater acoustic communication networks***		COM
Eve Schooler ***for contributions to multimedia protocols and internet standards***	COM C	COM
Erik Strom ***for contributions to reliable low latency communications and synchronization of code-division systems***	COM IT	COM
Stephan Ten Brink ***for contributions to iterative detection and decoding***	COM IT	COM
Edward Tiedemann ***for innovation and standardization of digital cellular communications***	VT COM IT	COM
R Vannithamby ***for contributions to resource allocation for cellular and internet of things technologies***	VT COM	COM
Zhaocheng Wang ***for contributions to pilot design and modulation of OFDM wireless systems***	VT COM BT	COM
Cong Wang ***for contributions to security of cloud storage and computation***	RL COM	COM
Dong Xuan ***for contributions to connected coverage in wireless networks***	COM	COM

Hongke Zhang ***for contributions to high-speed railway communications***	COM VT	COM
Gan Zheng ***for contributions to optimization and design of multiuser multi-antenna communications***	COM SP	COM
Aaron Ames ***for contributions to hybrid and safety-critical nonlinear control with demonstration on robotic systems***		CS
Domitilla Del Vecchio ***for contributions to circuit engineering in synthetic biology***	CS	CS
Hideaki Ishii ***for contributions to networked control of large-scale systems***	CS	CS
Asuman Ozdaglar ***for contributions to distributed multi-agent networks***		CS
Gianluigi Pillonetto ***for contributions to kernel-based linear system identification***	CS	CS
Chunjiang Qian ***for contributions to control and estimation of nonlinear systems***	CS	CS
Daniel Quevedo ***for contributions to optimal and model predictive control***	CS	CS
Jacquelien Scherpen ***for contributions to nonlinear model reduction and passivity-based control***	RA PE CS	CS

Bruno Sinopoli ***for contributions to networked and secure control systems***	CS	CS
Nathan Van De Wouw ***for contributions to hybrid, data-based and networked control***	CS	CS
Giovanni Mazzanti ***for contributions to high voltage direct current cable systems***	PE DEI	DEI
Cynthia Finelli ***for leadership and scholarship in engineering education***	E	E
Saurabh Sinha ***for leading micro/nanoelectronics research and education in Africa***	CAS	E
Hideaki Aochi ***for contributions to three dimensional flash memories***	ED	ED
Yogesh Chauhan ***for contributions to compact modeling of Si and GaN transistors***	SSC ED	ED
Vasilis Fthenakis ***for contributions to photovoltaics technology***	ED PE	ED
Robert Henderson ***for contributions to solid-state single photon imaging***	SSC ED	ED
Chang-jin Kim ***for research of surface-tension-based microelectromechanical systems***	ED	ED
Gourab Majumdar ***for contribution to power semiconductor devices and intelligent power module***	PEL ED	ED

Omkaram Nalamasu ***for contributions to patterning solutions and advancing materials engineering for electronics, display, and energy***		ED
Tetsuya Suemitsu ***for contributions to high-frequency high-electron-mobility transistors***	ED	ED
Takatoshi Tsujimura ***for contributions to the development of organic-light-emitting diode systems***	ED	ED
Yifeng Wu ***for contributions to Gallium Nitride microwave and power conversion devices***	ED PEL	ED
Alberto Avolio ***for contributions to knowledge and monitoring of arterial hemodynamics***	EMB	EMB
Issam El-naqa ***for contributions to machine learning applications in medicine and imaging***		EMB
James Gee ***for contributions to medical image processing and analysis***	C	EMB
Hanchuan Peng ***for contributions to visualization and quantitative analysis of large-scale biological data***	EMB SP	EMB
Paul Sanberg ***for contributions to stem cell therapies for neurodegenerative conditions***		EMB

Julia Schnabel ***for contributions to medical image computing***	EMB C	EMB
Jasjit Suri ***for contributions to computer-aided biomedical imaging diagnosis and its commercialization in atherosclerosis***	EMB	EMB
Joel Voldman ***for contributions to electronic microscale manipulation of cells***	EMB	EMB
Bhyrav Mutnury ***for contributions to signal integrity in complex data center systems***	EP EMC MTT	EMC
Jianqing Wang ***for contributions to electro-magnetic compatibility of biological and wearable/implant devices***	EMB MTT EMC	EMC
Deepak Goyal ***for contributions to fault isolation and failure analysis***	EP RL	EP
Daoqiang Lu ***for development of materials and manufacturing processes for mobile devices***	EP	EP
Gamal Refai-ahmed ***for leadership in thermal management of electronics product development***	EP	EP
Xiuping Jia ***for contributions to feature mining and classification of hyperspectral images***	GRS	GRS
Jun Li ***for contributions in hyperspectral image processing***	GRS IE	GRS

Zhao-liang Li ***for contributions to thermal infrared remote sensing***	GRS	GRS
Jeffrey Piepmeier ***for contributions to microwave radiometry to improve calibration, radio frequency interference filtering, and polarimetry***	GRS	GRS
Lizhe Wang ***for contributions to high performance computing in processing, analysis and applications of remote sensing imagery***	GRS C	GRS
Xiaoxiang Zhu ***for contributions to artificial intelligence and data science in Earth observation and global urban mapping***	GRS SP	GRS
Mohammad Nazmul Anwar ***for contributions to the system-balanced-robust power electronics design methodology for electrified vehicles***	IA	IA
Hua Geng ***for contribution to control of renewable energy power converters***	PEL IA PE IE	IA
Amit Gupta ***for leadership in power conversion systems***	PEL IA IE	IA
Chandra Namuduri ***for contributions to power electronics for safe and energy efficient electric vehicles***		IA
Mahesh Swamy ***for development of power electronics topologies***	IE PEL IA	IA
Mohammad Uddin ***for contributions to control techniques for AC motor drives***	PEL IA PE IE	IA

Firuz Zare ***for contribution to power converters and leadership role in standardization***	PEL IE IA	IA
Milos Manic ***for contributions to machine learning based cybersecurity for critical infrastructures***	IE	IE
Roberto Oboe ***for contributions to remote motion control systems***	CS IE	IE
Leila Parsa ***for contributions to control of multi-phase permanent magnet electrical drives***	PEL IA PE IE	IE
Akshay Rathore ***for contributions to the design and advancement of power electronics for drives and automotive industries***	IA PEL IE	IE
Jinhua She ***for contributions to intelligent control of complex metallurgical processes***	CS IE	IE
Hiralal Suryawanshi ***for contributions to converters for renewable energy systems, drives, and electrical machines***	IE	IE
Sergio Vazquez ***for contributions to control techniques for power converters and drives***	PEL IE	IE
Dong Yue ***for contributions to network-based control and its applications to power systems***	IE CS CIS	IE

Dongning Guo ***for contributions to multi-user detection and estimation theory***	COM IT	IT
Tara Javidi ***for contributions to stochastic resource allocation and active hypothesis testing***	IT VT COM CS	IT
Sandeep Pradhan ***for contributions to coding for distributed compression and structured coding***	IT	IT
Daniela Tuninetti ***for contributions to theory of repetition protocols and wireless interference management***	IT COM	IT
Pascal Vontobel ***for contributions to graphical models for channel coding***	IT SP	IT
Stephane Mangin ***for contributions to ultrafast magnetisation manipulation***	MAG SEN	MAG
Mi-ching Tsai ***for leadership in magnetic materials for the electric motor industry***	PEL IA PE CS MAG IE	MAG
Mingzhong Wu ***for contributions to spintronics and magnetization***	MAG	MAG
Shinji Yuasa ***for contributions to MgO-based magnetic tunnel junctions***	ED MAG	MAG
Peter Burke ***for contributions to active and passive microwave devices***		MTT

Rudy Emrick ***for contributions to the development of millimeter-wave communication systems***	AP MTT	MTT
Nicholas Kolias ***for contributions to the development of Gallium Nitride monolithic microwave integrated circuit technology***	MTT	MTT
Luciano Tarricone ***for contributions to microwave interactions with living systems and biomedical applications***	AP MTT	MTT
Valentin Jordanov ***for contributions to real-time digital and analog pulse processing in radiation measurements***	NPS	NPS
Yakov Krasik ***for contributions to plasma-based electron sources***		NPS
Johan Nuyts ***for contributions to theory and algorithms for image reconstruction in emission and transmission tomography***	NPS	NPS
Dana Yoerger ***for development of autonomous underwater vehicles for deep ocean exploration and science***	RA OE	OE
Enrique Acha ***for contributions to power electronics modelling and applications in electrical power systems***	PE	PE
Wenzhong Gao ***for contributions to grid integration of wind power and electric vehicle technology***	PEL IE PE	PE

Oriol Gomis Bellmunt ***for contributions to grid integration of renewable energy sources***	E PE CSC SEN PEL CS NANO SYS IE	PE
Yongpei Guan ***for contributions to robust and stochastic optimization for power system operations***	PE	PE
Dragan Jovcic ***for contributions to improvements in multi-terminal HVDC transmission grids and development of HVDC transformers***	PEL PE	PE
Ning Lu ***for contributions to load modeling and control methods for providing demand side grid services***	PE	PE
Kalyan Sen ***for the development and application of power flow control technology***	PEL PE SIT	PE
Ramteen Sioshansi ***for contributions to energy storage in electric power systems***	PE	PE
Poul Sorensen ***for contributions to wind power converter control and grid integration***	PE	PE
Suresh Srivastava ***for contributions to power system security and stability***	PE	PE

Zhongdong Wang ***for contributions to insulating liquids and frequency response analysis methods for power transformers***	PE DEI	PE
Jianhui Wang ***for contributions to unit commitment and economic dispatch with renewable generation***	PE	PE
Fushuan Wen ***for contributions to fault diagnosis in power grids***	PE SYS	PE
Wenchuan Wu ***for contributions to energy management, operations, and control***	PE	PE
Zheng Xu ***for contributions to control and modeling of modular multilevel converter based HVDC transmission systems***	PE	PE
Hamidreza Zareipour ***for contributions to the modeling of energy storage for system operation and planning***	PE	PE
Jizhong Zhu ***for application of optimization methods for real-time economic power system operation***	SMC PE	PE
Alireza Bakhshai ***for contributions to the development of synchronization techniques for power electronics converters***	PEL IA PE IE	PEL
Yaow-ming Chen ***for contributions to grid-connected power converters for renewable energy applications***	PEL IA PE IE	PEL
Zhengyu Lu ***for contributions to DC-DC power conversion and control***	PEL IA IE	PEL

Yasser Mohamed ***for contributions to the control and dynamic analysis of microgrids and power electronic systems***	PEL	PEL
Sanjib Panda ***for contributions to iterative learning control of motor drives***	PEL IA PE IE	PEL
Shinzo Tamai ***for contributions to control for motor drives and three-level converters***	PEL IA PE IE	PEL
Jin Wang ***for development of high density power converters and their use in electric cars***	PEL IA PE VT	PEL
Patrick Wheeler ***for contributions to matrix power converter technology***	PEL IE	PEL
Wim Bogaerts ***for contributions to design methodologies for silicon photonics components and circuits***	PHO C	PHO
Gabriella Cincotti ***for contributions to planar photonic devices and beam diffraction in anisotropic media***	PHO EMB	PHO
Hilmi Demir ***for contributions to semiconductor nanocrystal optoelectronics, colloidal nanophotonics, and lighting***	PHO	PHO
Dennis Killinger ***for contributions to laser spectroscopy***	PHO	PHO

Laurent Larger ***for contributions to optoelectronic delay oscillators and neuromorphic processing applications***	COM PHO	PHO
Sophie Larochelle ***for contributions to fiber devices and data transmission technologies***	PHO	PHO
Andrey Matsko ***for contributions to the development of microwave photonic oscillators***	PHO UFFC	PHO
Roberto Morandotti ***for contributions to integrated nonlinear and quantum optics***	PHO	PHO
Itsuro Morita ***for contributions to large-capacity transmissions systems with high-speed optical signals***	PHO	PHO
Salah Obayya ***for contributions to computational photonics***	PHO	PHO
Nelson Tansu ***for contributions to semiconductor photonics technologies***	PHO NANO	PHO
Chongjin Xie ***for contributions to optical transmission and datacenter optical networking***	PHO	PHO
Gianluca Antonelli ***for contributions to modeling and control of underwater robots***	RA	RA
Timothy Barfoot ***for contributions to mobile robot navigation***	RA	RA

Shuxiang Guo ***for contributions to medical robots for minimally invasive surgery and biomimetic underwater robots***	SMC RA BIO NANO SEN SYS	RA
Ayanna Howard ***for contributions to human-robot interaction systems***	RA SMC C	RA
Hadas Kress-gazit ***for contributions to automated control synthesis and formal methods for robotics***	RA	RA
Jose Neira ***for contributions to simultaneous localization and mapping (SLAM) for robot navigation***	RA	RA
Claude Samson ***for contributions to mobile and underactuated mechanical systems control***		RA
Danwei Wang ***for contributions to modelling, analysis, and control for constrained robots***	RA IE	RA
Junzhi Yu ***for contributions to bio-inspired swimming robots***	RA IE SMC	RA
Nachiappan Nagappan ***for contributions to software reliability***	RL	RL
Bryan Root ***for leadership in improving semiconductor reliability test methods***	RL ED	RL

Enrique Herrera-viedma ***for contributions to fuzzy decision systems and linguistic modeling***	SMC CIS	SMC
Honghai Liu ***for contributions to theory and applications of human-machine systems***	IE SMC	SMC
Yingxu Wang ***for contributions to real-time autonomous systems***	RA CIS SMC BIO SEN C SP	SMC
Animashree Anandkumar ***for contributions to theory and applications in signal processing, machine learning, and artificial intelligence***		SP
Achintya Bhowmik ***for leadership in perceptual augmentation devices***	CIS C SP	SP
Jingdong Chen ***for contributions to microphone array processing and speech enhancement in noisy and reverberant environments***	SP	SP
Gene Cheung ***for contributions to graph spectral image processing and interactive video streaming***	SP	SP
David Donoho ***for contributions to sparse signal acquisition and processing***		SP
Sharon Gannot ***for contributions to acoustical modelling and statistical learning in speech enhancement***	SP	SP

Yifan Gong ***for leadership in creating cloud speech recognition services in industry***	SP	SP
Xudong Jiang ***for contributions to face and fingerprint image recognition***	SP	SP
Lori Lamel ***for contributions to automatic speech recognition***	SP	SP
Chunming Li ***for contributions to computer vision and medical image analysis***	SP	SP
Yang Liu ***for contributions to speech understanding and language learning technology***	SP	SP
Matthew Mckay ***for contributions to random matrix theory in statistical signal processing***	COM VT SP	SP
Tomohiro Nakatani ***for contributions to far-field signal processing for speech enhancement and recognition***	SP	SP
Ruhi Sarikaya ***for leadership in spoken-language-processing and conversational understanding systems***	SP	SP
Gesualdo Scutari ***for contributions to distributed optimization in signal processing and communications***	SP	SP
Ling Shao ***for contributions to computer vision and representation learning***	SP	SP

Ivan Tashev ***for contributions to audio signal processing systems and algorithms for commercial microphone arrays***	SP	SP
Wolfgang Utschick ***for contributions to signal processing algorithms for multi-antenna communications systems***	SP	SP
Luisa Verdoliva ***for contribution to multimedia forensics***	SP GRS	SP
Tuomas Virtanen ***for contributions to sound event detection and source separation***	SP	SP
Michael Wakin ***for contributions to sparsity-based signal processing and compressive sensing***	SEN SP	SP
Yongyi Yang ***for contributions to medical image recovery and analysis***	EMB SP	SP
Xiaoping Zhang ***for contributions to signal processing in finance***	SP CAS	SP
Ahmed Ali ***for leadership in high-speed analog-to-digital converter design and calibration***	CAS COM SSC SP	SSC
Benton Calhoun ***for contributions to sub-threshold integrated circuits and self-powered systems***	ED SSC CAS	SSC
Inyup Kang ***for leadership in development of chip-set technologies for celluar communications***	SSC	SSC

Ali Keshavarzi ***for contributions to low-power circuits and devices in scaled CMOS technologies***	ED SSC	SSC
Dejan Markovic ***for contributions to low-power VLSI signal processing and neurotechnology***		SSC
David Allan ***for contributions to timing systems, and precision clocks***		UFFC
Hong Wang ***for development, integration, and commercialization of novel dielectric ceramics and composites for passive integration***	UFFC	UFFC
Shujun Zhang ***for contributions to the development of advanced piezoelectrics for transducers***	UFFC	UFFC
Haris Gacanin ***for development of operations and management systems for home broadband networks***	VT COM	VT
Jiandong Li ***for leadership in heterogeneous self-organizing wireless networks***	VT COM SP	VT
David Matolak ***for contributions to wireless channel modeling and applications***	VT COM	VT
Ai-chun Pang ***for contributions to resource management and service provisioning for mobile edge networks***	VT COM RFID C	VT
Hyundong Shin ***for contributions to the analysis and design of wireless communication and networking***	VT COM IT SP	VT

Honggang Wang ***for contributions to low power wireless for IoT and multimedia applications***	COM SEN VT	VT
Chau Yuen ***for contributions to energy efficient wireless communications***	RFID SEN SYS COM IE VT	VT
Richa Singh ***for contributions to robust and secure biometrics***	BIO C	BIO
Yung-hsiang Lu ***for contributions to energy efficiency of computer systems***	CEDA CAS	CEDA
Dmitri Maslov ***for contributions to quantum circuit synthesis and optimization, and compiling for quantum computers***		CEDA
Gang Qu ***for contributions to hardware intellectual property protection and security***		CEDA
Mehdi Tahoori ***for contributions to resilient nanoscale integrated circuits***	CEDA	CEDA
Amit Goyal ***for contributions to high-temperature superconducting materials***		CSC
Alan Kleinsasser ***for contributions to superconducting electronic devices, circuits, and systems***	CSC	CSC

Deji Akinwande ***for contributions to wafer-scale graphene synthesis and application to flexible devices***	ED	NANO
David Gracias ***for contributions to three-dimensional assembly and origami engineering of nanostructured materials and devices***		NANO
Paul Weiss ***for contributions to nanoscience and specifically electronic transport in molecular systems***		NANO
Bernhard Jakoby ***for contributions to fluidic sensor***	UFFC	SEN
Roya Maboudian ***for contributions to surface coatings and structural materials for microelectromechanical systems***		SEN
Ashwin Seshia ***for contributions to resonant-based inertial and mode-localized sensors***	ED SEN NANO UFFC	SEN
Thomas Thundat ***for contributions to multi-modal microelectromechanical systems for chemical and biological sensors***	SEN	SEN
Paul Hershey ***for application of data analytic to assist human decision-making***	SMC	SYS