2018 ACM FELLOWS HONORED FOR PIVOTAL ACHIEVEMENTS THAT UNDERPIN THE DIGITAL AGE

Computing Professionals Recognized for Transformative Contributions in Areas Including Accessible Voting, Computer Animation, Machine Learning, Natural Language Processing, and Software

New York, NY, December 5, 2018 – ACM, the Association for Computing Machinery, has named 56 members ACM Fellows for significant contributions in areas including computer architecture, mobile networks, robotics, and systems security. The accomplishments of the 2018 ACM Fellows underpin the technologies that define the digital age and greatly impact our professional and personal lives. ACM Fellows are composed of an elite group that represents less than 1% of the Association’s global membership.

“In society, when we identify our tech leaders, we often think of men and women in industry who have made technologies pervasive while building major corporations,” said ACM President Cherri M. Pancake. “At the same time, the dedication, collaborative spirit and creativity of the computing professionals who initially conceived and developed these technologies goes unsung. The ACM Fellows program publicly recognizes the people who made key contributions to the technologies we enjoy. Even when their work did not directly result in a specific technology, they have made major theoretical contributions that have advanced the science of computing. We are honored to add a new class of Fellows to ACM’s ranks and we look forward to the guidance and counsel they will provide to our organization.”

Underscoring ACM’s global reach, the 2018 Fellows hail from universities, companies and research centers in Finland, Greece, Israel, Sweden, Switzerland, and the US.

The 2018 Fellows have been cited for numerous contributions in areas including accessibility,
augmented reality, algorithmic game theory, data mining, storage, software and the World Wide Web.

ACM will formally recognize its 2018 Fellows at the annual Awards Banquet, to be held in San Francisco on June 15, 2019. Additional information about the 2018 ACM Fellows, as well as previous ACM Fellows, is available through the ACM Fellows site.

### 2018 ACM Fellows

**Gul Agha**  
University of Illinois at Urbana-Champaign  
*For research in concurrent programming and formal methods, specifically the Actor Model*

**Krste Asanovic**  
University of California, Berkeley  
*For contributions to computer architecture, including the open RISC-V instruction set and Agile hardware*

**N Asokan**  
Aalto University  
*For contributions to systems security and privacy, especially of mobile systems*

**Paul Barham**  
Google Brain  
*For contributions to the design of operating systems and scalable distributed information processing systems*

**Peter L. Bartlett**  
University of California, Berkeley  
*For contributions to the theory of machine learning*

**David Basin**  
ETH Zurich  
*For contributions to Information Security and Formal Methods*

**Elizabeth M. Belding**  
University of California, Santa Barbara  
*For contributions to communication in mobile networks and their deployment in developing regions*

**Rastislav Bodik**  
University of Washington  
*For contributions to program synthesis*

**Katy Borner**  
Indiana University  
*For contributions to methods and tools that enable users to render data into actionable insights*

**Amy S. Bruckman**  
Georgia Institute of Technology  
*For contributions to collaborative computing and foundational work in Internet research ethics*

**Jan Camenisch**  
IBM Research/DFINITY Labs Zurich  
*For contributions to privacy-enhancing cryptographic protocols and leadership in their practical realization*

**Adnan Darwiche**  
University of California, Los Angeles  
*For contributions to the foundations and technology of automated reasoning*

**Andre M. Dehon**  
University of Pennsylvania  
*For contributions to architecture exploration and design automation of spatially programmable computing fabrics*

**Premkumar T. Devanbu**  
University of California, Davis  
*For contributions to using software data and metadata to improve software tools and processes*
Tamal Dey
Ohio State University
For contributions to computational geometry and computational topology

Sandhya Dwarkadas
University of Rochester
For contributions to shared memory and reconfigurability

Steven Feiner
Columbia University
For contributions to human-computer interaction, virtual and augmented reality, and 3D user interfaces

Tim Finin
University of Maryland, Baltimore County
For contributions to theory and practice of knowledge sharing in distributed systems and the World Wide Web

Thomas Funkhouser
Princeton University and Google
For research contributions in computer graphics

Minos Garofalakis
Athena Research Center and Technical University of Crete
For contributions to data processing and analytics, particularly data streaming, approximation and uncertainty

Mario Gerla
University of California, Los Angeles
For contributions to design and analysis of mobile wireless protocols for vehicular safety and traffic applications

Juan E. Gilbert
University of Florida
For contributions to broadening participation in computing and to accessible voting technologies

Mohammad T. Hajiaghayi
University of Maryland, College Park
For contributions to the fields of algorithmic graph theory and algorithmic game theory

Dan Halperin
Tel Aviv University
For contributions to robust geometric computing and applications to robotics and automation

Johan Håstad
KTH Royal Institute of Technology, Stockholm
For contributions in circuit complexity, approximability and inapproximability, and foundations of pseudorandomness

Tian He
University of Minnesota, Twin Cities
For contributions to wireless networks, sensing systems, and Internet of things (IoT).

Wendi Beth Heinzelman
University of Rochester
For contributions to wireless communication systems and protocols and leadership in broadening participation in computing

Aaron Hertzmann
Adobe Research
For contributions to computer graphics, non-photo realistic rendering, computer animation and machine learning

Jessica K. Hodgins
Carnegie Mellon University
For contributions to character animation, human simulation, and humanoid robotics

John Hughes
Chalmers University
For contributions to software testing and functional programming

Charles Lee Isbell
Georgia Institute of Technology
For contributions to interactive machine learning; and for contributions to increasing access and diversity in computing

Kimberly Keeton
Hewlett Packard Laboratories
For contributions to improving the dependability, manageability, and usability of storage and novel memory systems
Sanjeev Khanna  
University of Pennsylvania  
For contributions to approximation algorithms, hardness of approximation, and sublinear algorithms

Lillian Lee  
Cornell University  
For contributions to natural language processing, sentiment analysis, and computational social science

Tom Leighton  
Akamai Technologies  
For his leadership in the establishment of content delivery networks, and his contributions to algorithm design

Fei-Fei Li  
Stanford University  
For contributions in building large knowledge bases for machine learning and visual understanding

Michael Littman  
Brown University  
For contributions to the design and analysis of sequential decision making algorithms in artificial intelligence

Huan Liu  
Arizona State University  
For contributions in feature selection for data mining and knowledge discovery and in social computing

Jiebo Luo  
University of Rochester  
For contributions to multimedia content analysis and social multimedia informatics

Bruce M. Maggs  
Duke University  
For contributions to the development of content distribution networks and the theory of computer networks

Bangalore S. Manjunath  
University of California, Santa Barbara  
For contributions to image search and retrieval with applications in digital libraries, marine sciences, and biology

Vishal Misra  
Columbia University and Google  
For contributions to network traffic modeling, congestion control and Internet economics

Frank Mueller  
North Carolina State University  
For contributions to the predictability of real-time systems, resilience in high-performance computing and multi-threading techniques

David Parkes  
Harvard University  
For contributions to computational markets, including novel mechanism design and incentive engineering methods

Gurudatta Parulkar  
Open Networking Foundation (ONF)  
For contributions to improving Internet architecture and open source software

Toniann Pitassi  
University of Toronto  
For contributions to research and education in the fields of computational and proof complexity

Lili Qiu  
University of Texas at Austin  
For contributions to the design and analysis of wireless network protocols and mobile systems

Matthew Roughan  
University of Adelaide  
For contributions to Internet measurement and analysis, with applications to network engineering

Amit Sahai  
University of California, Los Angeles  
For contributions to cryptography and to the development of indistinguishability obfuscation

Alex Snoeren  
University of California, San Diego  
For innovative approaches to measuring, managing and detecting network traffic
Gerald Tesauro  
IBM Research, Yorktown  
For contributions to reinforcement learning, neural networks, and intelligent autonomous agents

Bhavani Thuraisingham  
University of Texas at Dallas  
For contributions to methods, tools, and systems for security and privacy of data and applications

Salil Vadhan  
Harvard University  
For advancing computational complexity and cryptography, and for promoting public support for theoretical computer science

Ellen M. Voorhees  
National Institute of Standards and Technology  
For contributions in evaluation of information retrieval, question answering, and other language technologies

Avi Wigderson  
Institute for Advanced Study  
For contributions to theoretical computer science and mathematics

Alec Wolman  
Microsoft Research  
For contributions to trusted mobile systems and services

About ACM  
ACM, the Association for Computing Machinery is the world’s largest educational and scientific computing society, uniting computing educators, researchers and professionals to inspire dialogue, share resources and address the field’s challenges. ACM strengthens the computing profession’s collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports the professional growth of its members by providing opportunities for life-long learning, career development, and professional networking.

About the ACM Fellows Program  
The ACM Fellows Program, initiated in 1993, celebrates the exceptional contributions of the leading members in the computing field. These individuals have helped to enlighten researchers, developers, practitioners and end users of information technology throughout the world. The new ACM Fellows join a distinguished list of colleagues to whom ACM and its members look for guidance and leadership in computing and information technology.

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