



Association for  
Computing Machinery

*Advancing Computing as a Science & Profession*

## **NEWS RELEASE**

**Contact:** Jim Ormond  
212-626-0505  
[ormond@hq.acm.org](mailto:ormond@hq.acm.org)

### **2019 ACM FELLOWS RECOGNIZED FOR FAR-REACHING ACCOMPLISHMENTS THAT DEFINE THE DIGITAL AGE**

#### **Computing Professionals Honored for Foundational Work in Diverse Areas**

**New York, NY, December 11, 2019** – ACM, the Association for Computing Machinery, has named 58 members ACM Fellows for wide-ranging and fundamental contributions in areas including artificial intelligence, cloud computing, combating cybercrime, quantum computing and wireless networking. The accomplishments of the [2019 ACM Fellows](#) underpin the technologies that define the digital age and greatly impact our professional and personal lives. ACM Fellows comprise an elite group that represents less than 1% of the Association’s global membership.

“Computing technology has had a tremendous impact in shaping how we live and work today,” said ACM President Cherri M. Pancake in announcing the 2019 ACM Fellows. “All of the technologies that directly or indirectly influence us are the result of countless hours of collaborative and/or individual work, as well as creative inspiration and, at times, informed risk-taking. Each year, we look forward to welcoming some of the most outstanding individuals as Fellows. The ACM Fellows program is a cornerstone of our overall recognition effort. In highlighting the accomplishments of the ACM Fellows, we hope to give credit where it is due, while also educating the public about the extraordinary array of areas in which computing professionals work.”

Underscoring ACM’s global reach, the 2019 Fellows hail from universities, companies and research centers in Australia, Canada, China, Egypt, France, Germany, Israel, Italy, Switzerland, and the United States.

The contributions of the 2019 Fellows run the gamut of the many sub-disciplines of the computing field—including artificial intelligence, cloud computing, computer graphics, computational biology, data science, security and privacy, software engineering, quantum computing, and web science, to name a few.

Additional information about the 2019 ACM Fellows, as well as previously named ACM Fellows, is available through the [ACM Fellows site](#).

## 2019 ACM Fellows

### **Scott J. Aaronson**

University of Texas

*For contributions to quantum computing and computational complexity*

### **Tarek F. Abdelzaher**

University of Illinois at Urbana-Champaign

*For interdisciplinary contributions that bridge cyber-physical systems, social sensing, real-time computing, and control*

### **Saman Amarasinghe**

Massachusetts Institute of Technology

*For contributions to high performance computing on modern hardware platforms, domain-specific languages, and compilation techniques*

### **Kavita Bala**

Cornell University

*For contributions to rendering and scene understanding*

### **Magdalena Balazinska**

University of Washington

*For contributions to scalable distributed data systems*

### **Paul Beame**

University of Washington

*For contributions in computational and proof complexity and their applications, and for outstanding service*

### **Emery D. Berger**

University of Massachusetts Amherst

*For contributions in memory management and programming language implementation*

### **Ronald F. Boisvert**

National Institute of Standards and Technology

*For contributions to mathematical software and service to the profession*

### **Christian Cachin**

University of Bern

*For contributions to secure distributed computing and cryptographic protocols*

### **Brad Calder**

Google

*For contributions to cloud storage, processor simulation, replay, and feedback-directed optimization of systems and applications*

### **Diego Calvanese**

Free University of Bozen-Bolzano

*For contributions to description logics and their applications in data management and software engineering*

### **Srdjan Capkun**

Swiss Federal Polytechnic, Zurich

*For contributions to systems and wireless network security*

### **Claire Cardie**

Cornell University

*For contributions to natural language processing, including coreference resolution, information and opinion extraction*

### **Timothy M. Chan**

University of Illinois at Urbana-Champaign

*For contributions to computational geometry, algorithms, and data structures*

### **Kanianthra Mani Chandy**

California Institute of Technology

*For contributions to queueing networks, performance analysis, distributed and parallel programming, and distributed simulation*

### **Xilin Chen**

Institute of Computing Technology, Chinese Academy of Sciences

*For contributions to face and sign language recognition and multimedia systems*

### **Elizabeth F. Churchill**

Google

*For contributions to human-computer interaction and service to ACM*

**Philip R. Cohen**

Monash University

*For contributions to the theory and practice of multi-agent systems, human-computer dialogue, and multimodal interaction*

**Vincent Conitzer**

Duke University

*For contributions to game theory, social choice theory, and mechanism design*

**Noshir Contractor**

Northwestern University

*For contributions to advances in computational social science, network science and web science*

**Matthew B. Dwyer**

University of Virginia

*For contributions to the specification and analysis of software*

**Elena Ferrari**

University of Insubria

*For contributions to security and privacy of data and social network systems*

**Michael J. Freedman**

Princeton University

*For contributions to robust distributed systems for the modern cloud*

**Deborah Frincke**

US National Security Agency

*For contributions in education, the practice of research, and the leadership of cybersecurity*

**Lise Getoor**

University of California, Santa Cruz

*For contributions to machine learning, reasoning under uncertainty, and responsible data science*

**Maria L. Gini**

University of Minnesota

*For contributions to robotics and multi-agent systems and a lifelong commitment to diversity in computing*

**Subbarao Kambhampati**

Arizona State University

*For contributions to automated planning and human-aware AI systems and leadership within the field*

**Tamara G. Kolda**

Sandia National Laboratories

*For innovations in algorithms for tensor decompositions, contributions to data science, and community leadership*

**Xiang-Yang Li**

University of Science and Technology of China

*For contributions to the design, analysis and optimization of IoT and mobile systems*

**Songwu Lu**

University of California, Los Angeles

*For helping create a more resilient and performant cellular network*

**Wendy Elizabeth Mackay**

Inria

*For contributions to human-computer interaction, mixed reality and participatory design, and leadership in ACM SIGCHI*

**Diana Marculescu**

University of Texas at Austin

*For contributions to the design and optimization of energy-aware computing systems*

**Sheila McIlraith**

University of Toronto

*For contributions to knowledge representation and its applications to automated planning and semantic web services*

**Rada Mihalcea**

University of Michigan

*For contributions to natural language processing, with innovations in data-driven and graph-based language processing*

**Robin R. Murphy**

Texas A&M University

*For contributions in founding and advancing the field of computing for disasters and robotics*

**Marc Najork**

Google

*For contributions to web search and web science*

**Jason Nieh**

Columbia University

*For contributions to operating systems, virtualization, and computer science education*

**Hanspeter Pfister**

Harvard University

*For contributions to volume rendering, visualization, computer graphics, and computer vision applications*

**Timothy M. Pinkston**

University of Southern California

*For contributions to interconnection network routing algorithms and architectures, and leadership in expanding computing research*

**Mihai Pop**

University of Maryland, College Park

*For contributions to computational biology, algorithms, and software for DNA sequence analysis and sequence assembly*

**Andreas Reuter**

Heidelberg University/Heidelberg Laureate

Forum Foundation

*For contributions to database concurrency control and for service to the community*

**Jeffrey S. Rosenschein**

Hebrew University

*For contributions to multi-agent systems, in particular, the use of game theory in multi-agent systems*

**Srinivasan Seshan**

Carnegie Mellon University

*For contributions to computer networking, mobile computing and wireless communications*

**Prashant J. Shenoy**

University of Massachusetts Amherst

*For contributions to the modeling and design of distributed systems*

**Peter W. Shor**

Massachusetts Institute of Technology

*For contributions to quantum computing, information theory, and randomized algorithms*

**Mona Singh**

Princeton University

*For contributions to computational biology, spearheading algorithmic and machine learning approaches for characterizing proteins and their interactions*

**Ramesh K. Sitaraman**

University of Massachusetts Amherst

*For contributions to content delivery networks, distributed systems, and scalable Internet services*

**Dawn Song**

University of California, Berkeley

*For contributions to security and privacy*

**Salvatore J. Stolfo**

Columbia University

*For contributions to machine-learning-based cybersecurity and parallel hardware for database inference systems*

**Dacheng Tao**

The University of Sydney

*For contributions to representation learning and its applications*

**Moshe Tennenholtz**

Technion

*For contributions to AI and algorithmic game theory*

**Giovanni Vigna**

University of California, Santa Barbara

*For contributions to improving the security of the Internet and combating cybercrime*

**Nisheeth K. Vishnoi**

Yale University

*For contributions to theoretical computer science and its connections with mathematics, sciences, and social sciences*

**Darrell Whitley**

Colorado State University

*For technical and professional leadership in the field of genetic and evolutionary computation*

**Yuan Xie**

University of California, Santa Barbara

*For contributions to the design techniques and tools for the implementation and evaluation of computer architectures*

**Moustafa Amin Youssef**

Alexandria University

*For contributions to location tracking algorithms*

**Carlo A. Zaniolo**

University of California, Los Angeles

*For contributions to the theory and practice of data and knowledge-base systems*

**Lidong Zhou**

Microsoft Research Asia

*For contributions to trustworthy distributed computing and to systems research and education in China*

**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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