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## **ACM NAMES FELLOWS FOR COMPUTING ADVANCES THAT ARE TRANSFORMING SCIENCE AND SOCIETY**

### **2013 Fellows Hail from World's Leading Universities and Corporations**

**NEW YORK, December 10, 2013** -- ACM [www.acm.org](http://www.acm.org) has recognized 50 of its members for their contributions to computing that are driving innovations across multiple domains and disciplines. The 2013 ACM Fellows <http://fellows.acm.org>, from the world's leading universities, corporations, and research labs, have achieved advances in computing research and development that are accelerating the digital revolution and impacting every dimension of how we live, work, and play ... worldwide.

ACM President Vinton G. Cerf celebrated the impact of innovations achieved by this year's ACM Fellows. "We recognize these scientists and engineers, creators and builders, theorists and practitioners who are making a difference in our lives," he said. "They're enabling us to listen, learn, calculate, and communicate in ways that underscore the benefits of the digital age. Their advances have led to opportunities for improved healthcare, enhanced security, expanded interactions, and enriched lifestyles. Some recipients have also led efforts to extend computing across continents and countries including Brazil, China, and Germany."

The complete list of 2013 ACM Fellows is appended to this announcement.

Within the corporate sector, the 2013 ACM Fellows named from **IBM Research** were cited for contributions to knowledge discovery and data mining, and for leadership in probabilistic methods for data and system simulation management and analysis. **Raytheon BBN Technologies'** ACM Fellow was recognized for contributions to quantum communications, advanced networks, and programming literacy. **Liquid Robotics'** ACM Fellow was cited for contributions to programming languages, tools, and environments. **Boeing's** ACM Fellow was honored for achievements in computer graphics, user interaction, and visual analytics. Other companies with 2013 ACM Fellows are **Yahoo!, Google Inc., and Microsoft Research**. Their respective contributions include industrial leadership and information retrieval; cryptography in systems security and privacy; and computer vision and multimedia.

Among the universities with 2013 ACM Fellows is the **University of California**, with representatives from **San Diego, Berkeley, Irvine, and Los Angeles** campuses. These Fellows were recognized for achievements in security methods for high-quality cryptography; software reliability and quality; information retrieval and computational linguistics, and algorithms for graph partitioning and commodity flows; foundations of automated reasoning and approaches to data mining and machine learning; and research on human interactions with information systems and data practices. **Cornell University's** ACM Fellows were honored for contributions to the science of information and social networks; languages and systems for implementing secure computing systems; and design and analysis of approximation algorithms. At the **University of Maryland**, ACM Fellows were recognized for image processing, computer vision, and pattern recognition; and automated search and planning. The ACM

Fellows at **Massachusetts Institute of Technology** were cited for wireless networking and Internet congestion control, and synchronization in concurrent programming. The **University of Pennsylvania's** ACM Fellows were recognized for algorithmic approaches to program reliability and bioinformatics; query languages and optimization, and data provenance.

Other North American universities with 2013 ACM Fellows include **University of Michigan; University of North Carolina Chapel Hill; Duke University; University of Illinois at Urbana-Champaign; Carnegie Mellon University; University of Rochester; Texas A&M University; State University of New York Oswego; Stanford University; Virginia Bioinformatics Institute and Virginia Polytechnic Institute; Rice University; Harvard University; New York University Courant Institute of Mathematical Sciences; University of Southern California; Georgia Institute of Technology;** and **University of Texas, Austin**. ACM Fellows from these institutions were cited respectively for achievements in human computer interaction; multiprocessor and multicore real-time systems; sensor network infrastructure optimization; computer vision; software architecture; artificial intelligence for assistive technology; wireless communication and control; software for concurrency; natural language processing; high performance computing algorithms; parallel and high performance computing; verification of practical programming languages; data management; teamwork and security games; network communication and computation; and randomness and complexity theory.

Among universities outside of North America, the 2013 ACM Fellows hailed from **University College London; Politecnico di Milano; Pontifical Catholic University of Rio de Janeiro; Peking University; RWTH Aachen University, Germany; ETH Zurich (Swiss Federal Institute of Technology), RMIT University, Australia; Seoul National University; and National University of Singapore**. Fellows from these universities were recognized respectively for achievements in computer vision and image retrieval, and information retrieval theory and practice; database management; software engineering; video technology; conceptual modeling; operating systems and networking research; database query optimization; scalable data mining and query processing; and computational biology.

ACM will formally recognize the 2013 Fellows at its annual Awards Banquet on June 21, 2014, in San Francisco. Additional information about the ACM 2013 Fellows, as well as previous ACM Fellows and award winners is available at <http://awards.acm.org>.

## 2013 Fellows

### **Mark S. Ackerman**

*University of Michigan*

For contributions to human computer interaction, with emphasis on finding and sharing expertise

### **Charu C. Aggarwal**

*IBM Research*

For contributions to knowledge discovery and data mining algorithms

### **James H. Anderson**

*University of North Carolina at Chapel Hill*

For contributions to the implementation and analysis of multiprocessor and multicore real-time systems

### **Mihir Bellare**

*University of California, San Diego*

For contributions to provable security methods supporting high-quality, cost-effective cryptography

### **Christine L. Borgman**

*University of California, Los Angeles*

For contributions to research on human interaction with information systems, data practices, and information policy

### **Stefano Ceri**

*Politecnico di Milano*

For contributions to database management, including distributed databases, rule-processing, and search computing

**Krishnendu Chakrabarty**

*Duke University*

For contributions to optimization methods for system-on-chip test automation, microfluidic biochips, and sensor network infrastructure

**Ramalingam Chellappa**

*University of Maryland*

For contributions to image processing, computer vision, and pattern recognition

**Ingemar Cox**

*University of Copenhagen/University College London*

For contributions to computer vision, image retrieval, and digital watermarking

**Carlos J. P. De Lucena**

*Pontifical Catholic University of Rio de Janeiro*

For contributions in software engineering and multiagent systems, and for computer science leadership in Brazil

**Rina Dechter**

*University of California, Irvine*

For contributions to the algorithmic foundations of automated reasoning with constraint-based and probabilistic information

**Chip Elliott**

*Raytheon BBN Technologies*

For scientific contributions enabling quantum communications, advanced tactical networks, and programming literacy

**David Forsyth**

*University of Illinois at Urbana-Champaign*

For contributions to computer vision

**Wen Gao**

*Peking University*

For contributions to video technology, and for leadership to advance computing in China

**David Garlan**

*Carnegie Mellon University*

For contributions to the development of software architecture as a discipline in software engineering

**James Gosling**

*Liquid Robotics*

For Java, NeWS, Emacs, NetBeans, and other contributions to programming languages, tools, and environments

**Peter Haas**

*IBM Research – Almaden*

For leadership in probabilistic methods for the management and analysis of data and for system simulation

**Marti Hearst**

*University of California, Berkeley*

For contributions to information retrieval and computational linguistics

**Matthias Jarke**

*RWTH Aachen University (Germany Aachen University of Technology)*

For contributions to conceptual modeling, requirements engineering, metadata management, and computer science leadership in Germany

**Sampath K. Kannan**

*University of Pennsylvania*

For contributions to algorithmic approaches to program reliability, bioinformatics, and for service to the computer science research community

**David J. Kasik**

*Boeing*

For contributions to computer graphics, user interface software, and visual analytics

**Dina Katabi**

*Massachusetts Institute of Technology*

For contributions in cross-layer wireless networking, wireless network coding, and Internet congestion control

**Henry A. Kautz**

*University of Rochester*

For contributions to artificial intelligence and pervasive computing with applications to assistive technology and health

**Jon Kleinberg**

*Cornell University*

For contributions to the science of information and social networks

**Panganamala Kumar**

*Texas A&M University*

For contributions to wireless communication and control technologies

**Douglas S. Lea**

*State University of New York, Oswego*

For contributions to software, particularly in support of concurrency

**Yoelle Maarek**

*Yahoo!*

For contributions to industrial leadership and to information retrieval and Web search

**Christopher D. Manning**

*Stanford University*

For contributions to natural language processing research and education

**Madhav V. Marathe**

*Virginia Bioinformatics Institute and Virginia Polytechnic Institute*

For contributions to high performance computing algorithms and software environments for simulating and analyzing socio-technical systems

**John M. Mellor-Crummey**

*Rice University*

For contributions to parallel and high performance computing

**Greg Morrisett**

*Harvard University*

For contributions to mathematically-based methods for ensuring the efficient implementation and verification of practical programming languages

**Andrew C. Myers**

*Cornell University*

For contributions to languages and systems that use information flow for implementing secure computing systems

**Dana Nau**

*University of Maryland*

For contributions to automated search and planning

**Satish Rao**

*University of California, Berkeley*

For contributions to algorithms for graph partitioning and for single- and multi-commodity flows

**S.E. Robertson**

*University College London*

For contributions to the theory and practice of information retrieval

**Timothy Roscoe**

*ETH Zurich*

For contributions to operating systems and networking research

**Timoleon K. Sellis**

*RMIT University (Australia)*

For contributions to database query optimization, spatial data management and data warehousing

**Dennis E. Shasha**

*Courant Institute, New York University*

For technical and literary contributions over a broad range of data management topics

**Nir N. Shavit**

*Massachusetts Institute of Technology*

For contributions to the theory and practice of synchronization in concurrent programming

**Kyuseok Shim**

*Seoul National University*

For contributions to scalable data mining and query processing

**Padhraic Smyth**

*University of California, Irvine*

For contributions to probabilistic and statistical approaches to data mining and machine learning

**Milind Tambe**

*University of Southern California*

For contributions to theory and practice of multi-agent systems, teamwork and security games

**Val Tannen**

*University of Pennsylvania*

For contributions to query languages, query optimization and data provenance

**David P. Williamson**

*Cornell University*

For contributions to the design and analysis of approximation algorithms

**Limsoon Wong**

*National University of Singapore*

For contributions to database theory and computational biology

**Moti Yung**

*Google Inc.*

For contributions to cryptography and its use in security and privacy of systems

**Ellen Zegura**

*Georgia Institute of Technology*

For contributions to communication and computation in intermittingly-connected networks

**Zhengyou Zhang**

*Microsoft Research*

For contributions to computer vision and multimedia

**Yuanyuan Zhou**

*University of California, San Diego*

For contributions to software reliability and quality

**David Zuckerman**

*University of Texas at Austin*

For contributions to randomness extraction, pseudorandomness, and their role in complexity theory

**About ACM**

ACM, the Association for Computing Machinery [www.acm.org](http://www.acm.org), 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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