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The Association for Computing Machinery
Advancing Computing as a Science & Profession

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ACM NAMES FELLOWS FROM WORLD'S LEADING UNIVERSITIES AND CORPORATIONS FOR COMPUTING INNOVATIONS

Achievements Range from Practical to Theoretical Advances

NEW YORK, December 7, 2010 -- ACM **www.acm.org** has recognized 41 of its members for their contributions to computing and computer science that have provided fundamental knowledge to the field and generated multiple innovations in industry, commerce, entertainment, and education. The 2010 ACM Fellows **http://fellows.acm.org/**, from the world's leading universities, corporations, and research labs, achieved accomplishments that are driving the innovations necessary to sustain competitiveness in the digital age.

"These men and women have made advances in technology and contributions to the computing community that are meeting the dynamic demands of the 21st century," said ACM President Alain Chesnais. "Their ability to think critically and solve problems creatively is enabling great advances on an international scale.   The selection of this year's Fellows reflects broad international representation of the highest achievements in computing, which are advancing the quality of life throughout society."

The complete list of 2010 ACM Fellows is appended to this announcement.

Within the corporate sector, the 2010 ACM Fellows named from **Google Inc**. were cited for contributions ranging from multi-core computing to machine learning, algorithms for Internet ad auctions, and the invention of the optical mouse. **Microsoft Research's** ACM Fellows were recognized for achievements in microprocessor architecture and the mathematical foundations of dynamic random networks. **AT&T**'s ACM Fellow was cited for contributions to programming language design, theory, and practice. **IBM Almaden and Thomas J. Watson Research Centers** had Fellows who were honored for object-oriented programming language design and implementation and human-computer interface research and innovation. Other companies with 2010 Fellows were **Xilinx Research Labs** and **Galois.** Their respective contributions include reconfigurable architecture design and design automation tools, and functional programming.

Among the universities with 2010 ACM Fellows was the **University of Texas at Austin**, whose Fellows were recognized for achievements in fault-tolerant distributed computing, and large-scale

distributed computer systems, and natural language processing. Fellows from the **University of Illinois at Urbana-Champaign** were recognized for contributions to hardware and language memory models and multiprocessor architectures. **Carnegie Mellon University** Fellows were cited for contributions to graph and multimedia mining and revolutionizing human computer interaction.

Other North American universities with 2010 ACM Fellows include **University of Michigan; Boston University; Washington University; Duke University; Indiana University; University of California at Santa Barbara, San Diego, and Berkeley; Rice University; Rutgers University; Yale University; Brown University; University of British Columbia; and the University of Waterloo.** ACM Fellows from these institutions were cited for achievements in reliable storage and virtual machines; networks and distributed systems; automatic program parallelization; energy management for mobile devices; numerical optimization; data management protocols; computational geometry; algorithms for DNA sequencing; large scale systems and network security; theory and application of machine learning; robotic motion planning; algorithms for Internet ad auctions; algorithms for solving linear equations; graph algorithms; biomolecular computation; and data management.

Among universities outside North America, the 2010 ACM Fellows include **Monash University** in Australia; **University of Auckland** in New Zealand; **University of Southampton** in UK; **École Polytechnique Fédérale de Lausanne** and **Swiss Federal Institute of Technology** in Switzerland; **University of Kaiserslautern** and **Fraunhofer Institute for Experimental Software Engineering** in Germany; **University College** in UK; and **Saarland University** in Germany. Fellows from these universities were recognized for contributions to high performance supercomputers; parallel processor and memory system design; semantic web and web science; security in wireless networks; XML data management; software engineering research for industrial applications; software testing; and automated debugging.

ACM will formally recognize the 2010 Fellows at its annual Awards Banquet in June 4, 2011, in San Jose, CA. Additional information about the ACM 2010 Fellows, the awards event, as well as previous ACM Fellows and award winners is available at **www.acm.org/awards**.

2010 Fellows and Citations

David Abramson
Monash University
For contributions to software engineering tools and techniques for high performance and distributed supercomputers

Sarita Adve
University of Illinois at Urbana-Champaign
For contributions to hardware and language memory models, and to low-power and resilient systems

Lorenzo Alvisi
The University of Texas at Austin
For contributions to fault-tolerant distributed computing, bridging theory and practice

Luiz André Barroso
Google Inc.
For contributions to multi-core computing, warehouse scale data-center architectures, and energy proportional computing

Doug Burger
Microsoft Research
For contributions to distributed microprocessor architectures and memory systems

Jennifer Chayes
Microsoft Research New England Lab
For contributions to the foundations of dynamic random networks in theoretical computer science

Peter M. Chen
University of Michigan
For contributions to reliable storage and virtual machines

Anne Condon
University of British Columbia
For contributions to complexity theory and leadership in advancing women in computing

Mark Crovella
Boston University
For contributions to the measurement and analysis of networks and distributed systems

Ron K. Cytron
Washington University
For contributions to algorithms and implementations of automatic program parallelization

Michael Dahlin
The University of Texas at Austin
For contributions to the science and engineering of large-scale distributed computer systems

Amr El Abbadi
University of California at Santa Barbara
For contributions to scalable and fault-tolerant data management protocols

Carla Ellis
Duke University
For contributions to techniques for energy management in mobile devices, and for service to the computing community

Christos Faloutsos
Carnegie Mellon University
For contributions to data mining, indexing, fractals, and power laws

Kathleen Fisher
AT&T
For contributions to programming language design, theory, and practice, and for service to the computing community

James Goodman
University of Auckland
For contributions to parallel processor and memory system design

Professor Dame Wendy Hall
University of Southampton
For contributions to the semantic web and web science and for service to ACM and the international computing community

Jean-Pierre Hubaux
EPFL (École Polytechnique Fédérale de Lausanne)
For contributions to security in wireless networks

Michael Jordan
University of California, Berkeley
For contributions to the theory and application of machine learning

Lydia Kavraki
Rice University
For contributions to robotic motion planning and its application to computational biology

Sara Kiesler
Carnegie Mellon University
For contributions to Human Computer Interaction

Philip Klein
Brown University
For contributions to graph algorithms

Donald Kossmann
ETH Zurich (Swiss Federal Institute of Technology)
For advances in XML data management and distributed information systems

John Launchbury
Galois
For contributions to the development of functional programming

Richard F. Lyon
Google Inc.
For contributions to machine perception and for the invention of the optical mouse

Raymond Mooney
The University of Texas at Austin
For contributions to machine learning and natural language processing

S. Muthukrishnan
Rutgers University / Google Inc.
For contributions to efficient algorithms for string matching, data streams, and internet ad auctions

Fernando Pereira
Google Inc.
For contributions to machine-learning models of natural language and biological sequences

Pavel Pevzner
University of California, San Diego
For contributions to algorithms for genome rearrangements, DNA sequencing, and proteomics

Dieter Rombach
University of Kaiserslautern and the Fraunhofer Institute for Experimental Software Engineering (IESE), Kaiserslautern, Germany
For contributions to empirical software engineering research and its successful application to industrial practice

David Rosenblum
University College London
For contributions to software testing and distributed systems, and for service to the software engineering community

Stefan Savage
University of California, San Diego
For contributions to large scale systems and network security

Robert Schnabel
Indiana University
For leadership of the computing community in education and diversity, and for contributions to numerical optimization

Daniel Spielman
Yale University
For contributions to the design and analysis of algorithms

Subhash Suri
University of California, Santa Barbara
For algorithmic contributions in computational geometry, networks, and computational economics

Frank Tompa
University of Waterloo
For contributions to text-dominated and semi-structured data management

Josep Torrellas
University of Illinois at Urbana-Champaign
For contributions to shared-memory multiprocessor architectures and thread-level speculation

Stephen Trimberger
Xilinx Research Labs
For contributions to the design of programmable logic and reconfigurable architectures, and for the development of design automation tools that enable their use

David Ungar
IBM Thomas J. Watson Research Center
For contributions to the design and implementation of object-oriented programming languages

Andreas Zeller
Saarland University
For contributions to automated debugging, and to mining software archives

Shumin Zhai
IBM Almaden Research Center
For contributions to human-computer interface research and innovation

About ACM
ACM, the Association for Computing Machinery **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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