AWARDS









Introduction

ACM, the Association for Computing Machinery, is the world's largest educational and scientific computing society. ACM's overarching goal is to advance computing as a science and a profession. A very important part of this goal is to recognize outstanding technical and professional achievements in computing and computer science through our series of awards.

These prestigious and internationally recognized honors are an integral part of ACM's mission to unite computing educators, researchers, and professionals to inspire dialogue, share resources, and address the field's challenges.

ACM welcomes nominations for candidates whose work exemplifies the best and most influential contributions to our community, and society at large. More information on nominating candidates for future awards is available on page 30 in this booklet.

The awards included in this overview honor recipients of ACM's 2023 awards, which are being presented at the ACM Awards Banquet on June 22, 2024, at The Palace Hotel in San Francisco, California.

More information on ACM's Awards Programs can be found at https://awards.acm.org, including links to the full award citations and a downloadable version of this booklet.



Contents

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ACM Awards

A.M. Turing Award	4
ACM Prize in Computing	5
ACM Frances E. Allen Award for Outstanding Mentoring	6
ACM – AAAI Allen Newell Award	7
ACM Software System Award	8
ACM Grace Murray Hopper Award	9
ACM Paris Kanellakis Theory and Practice Award	
ACM Policy Award	11
ACM Karl V. Karlstrom Outstanding Educator Award	12
ACM Distinguished Service Award	13
Outstanding Contribution to ACM Award	14
ACM Athena Lecturer Award	15
ACM Doctoral Dissertation Award	16
ACM Presidential Award	17-18
ACM Fellows	19
Additional ACM Awards	
ACM Charles P. "Chuck" Thacker Breakthrough in Computing Awar	d20
ACM Eugene L. Lawler Award for Humanitarian Contributions	
within Computer Science and Informatics	20
SIAM – ACM Prize in Computational Science and Engineering	20
ACM – IEEE CS Eckert-Mauchly Award	21
ACM – IEEE CS Ken Kennedy Award	21
ACM – IEEE CS George Michael Memorial HPC Fellowships	22
ACM/CSTA Cutler-Bell Prize in High School Computing	23
ACM Gordon Bell Prize	24
ACM Gordon Rell Prize for Climate Modelling	24





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Regional ACM Award

ACM India Doctoral Dissertation Award	25
ACM India Early Career Researcher Award	26
ACM India Outstanding Contribution by a Woman	26
ACM India Outstanding Contribution to Computing Education Award	27
CCF/ACM Award for Artificial Intelligence	27
ACM China Doctoral Dissertation Award	28
ACM China Rising Star Award	28
IPSJ/ACM Award for Early Career Contributions to Global Research	29
Awards Committee Co-Chairs	30
ACM Award Nomination Submission Procedures	30
ACM Special Interest Group Awards	30
2023 ACM Award Subcommittee Chairs and Members31-	32
Past Recipients	40
ACM Fellows – Complete Listing41-	51
In Memoriam, ACM Fellows	52



A.M. Turing Award



Avi WigdersonInstitute for Advanced Study

The A.M. Turing Award is presented to Avi Wigderson for foundational contributions to the theory of computation, including reshaping our understanding of the role of randomness in computation, and for his decades of intellectual leadership in theoretical computer science.

A leader in theoretical computer science research for four decades, Wigderson has made foundational contributions to the understanding of the role of randomness and pseudorandomness in computation. Computer scientists have discovered a remarkable connection between randomness and computational difficulty. Working with colleagues, Wigderson authored a highly influential series of works on trading hardness for randomness. They proved that, under standard and widely believed computational assumptions, every probabilistic polynomial time algorithm can be efficiently derandomized.

Outside of his work in randomness, Wigderson has been an intellectual leader in several other areas of theoretical computer science, including multi-prover interactive proofs, cryptography, and circuit complexity. In addition to his groundbreaking technical contributions, Wigderson is recognized as an esteemed mentor and colleague who has advised countless young researchers.

This award celebrates the work of one of the founding fathers of modern computer science – Alan Mathison Turing (1912-1954). In a 1936 paper, Turing introduced a precise definition of a computational machine (now called a Turing Machine). He is perhaps best known for his contributions during World War II in cracking the Enigma code. He later studied problems key to artificial intelligence.

Accompanied by a prize of \$1,000,000, ACM's most prestigious award is given to recognize contributions of a technical nature which are of lasting and major technical importance to the computing field. Financial support of the A.M. Turing Award is provided by Google Inc.



ACM Prize in Computing



Amanda Randles
Duke University

The ACM Prize in Computing is presented to Amanda Randles for ground-breaking contributions to computational health through innovative algorithms, tools, and high-performance computing methods for diagnosing and treating a variety of human diseases.

Randles has led her field in developing computational tools to enable high-accuracy 3D blood flow simulations to diagnose and treat a variety of human diseases. Her major contributions to the field have included developing the first simulation of the coronary arterial tree at the cellular level for an entire heartbeat, using 1.5 million computer processing units (CPU's) to simulate blood flow across the scale of the whole human body, and using trained machine learning models to develop a framework for predicting key hemodynamic metrics under new conditions.

As part of her broader work in using computers to better understand physiology, Randles has made specific contributions to fluid structure interaction, which studies the physics of a fluid interacting with a solid structure (such as the friction of blood with a vein wall). Her computational tools for modelling the cardiovascular system can also be used to understand how tumors metastasize.

The ACM Prize in Computing recognizes an early to mid-career fundamental innovative contribution in computing that, through its depth, impact, and broad implications, exemplifies the greatest achievements in the discipline. The award carries a prize of \$250,000. Financial support is provided by an endowment from Infosys Ltd.



ACM Frances E. Allen Award for Outstanding Mentoring



Margaret Martonosi
Princeton University

The ACM Frances E. Allen Award for Outstanding Mentoring is presented to Margaret Martonosi for outstanding and far-reaching mentoring in computer architecture, and to the broader CS community. Martonosi, the Hugh Trumbull Adams '35 Professor of Computer Science at Princeton University, is a leader in the design, modelling, and verification of power efficient computer architecture.

Martonosi instituted the Discipline Specific Workshops program, an initiative of the women's group of the Computer Research Association (CRA-W) and the Coalition to Diversify Computing to increase participation of women and members of underrepresented groups. At Princeton, she has been recognized as a dedicated and extremely effective mentor for PhD students as well as women and minority graduates and undergraduates. Themes in Martonosi's work include combining theoretical underpinnings and novel algorithms with simple hardware ideas and a detailed understanding of workload behavior.

The ACM Frances E. Allen Award for Outstanding Mentoring is presented biennially to an individual who has exemplified excellence and/or innovation in mentoring with particular attention to recognition of individuals who have shown outstanding leadership in promoting diversity, equity, and inclusion in computing. The award is named for Frances E. Allen, an American computer scientist and pioneer in optimizing compilers who was the first woman to receive the ACM A.M. Turing Award, and especially known for her mentorship of younger colleagues. The award is accompanied by a prize of \$25,000 to the awardee, and an additional \$10,000 cash contribution to an approved charity of the awardee's choice. Financial support is provided by Microsoft Research.

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ACM - AAAI Allen Newell Award



David BleiColumbia University

The Newell Award is presented to David Blei for significant contributions to machine learning, information retrieval, and statistics, especially in the areas of topic models and approximate inference.

Blei's signature accomplishment is to have been the leading researcher worldwide in the machine learning area of "topic modelling," which seeks to link machine learning to other disciplines, including information retrieval. He introduced topic modelling in the foundational paper "latent Dirichlet allocation" (LDA), which is a problem-solving framework for obtaining insight from structured data. Blei has also been a leader in variational inference (VI), developing a novel framework–stochastic variational inference (SVI)–which is one of the major underlying algorithmic engines used in generative AI.

In his work on discrete choice modelling, Blei has developed a methodology for answering counterfactual queries about changes in prices, which helps to identify complementary and substitutable pairs of products. This work has built a bridge between computer science and econometrics and has been cited for its impactful use of machine learning modelling.

The Newell Award is presented to individuals selected for career contributions that have breadth within computer science or that bridge computer science and other disciplines. It is accompanied by a \$10,000 prize provided by ACM and the Association for the Advancement of Artificial Intelligence (AAAI), and by individual contributions.



ACM Software System Award



Andrew S. Tanenbaum Vrije Universiteit

The Software System Award is presented to Andrew S. Tanenbaum for MINIX, which influenced the teaching of Operating Systems principles to multiple generations of students and contributed to the design of widely used operating systems, including Linux.

Tanenbaum created MINIX 1.0 in 1987 to accompany his textbook *Operating Systems: Design and Implementation*. MINIX was a small microkernel-based UNIX operating system for the IBM PC, which was popular at the time. It was roughly 12,000 lines of code, and in addition to the microkernel, included a memory manager, file system and core UNIX utility programs. It became free open-source software in 2000. Beyond enabling the success of Tanenbaum's textbook, the impact of MINIX has been phenomenal. LINUX has grown into the most successful open-source operating system powering cloud servers, mobile phones and IoT devices. Beyond the direct impact of MINIX, Tanenbaum's advocacy for microkernel design has impacted generations of operating system designers.

The Software System Award is presented to an institution or individuals recognized for developing a software system that has had a lasting influence, reflected in contributions to concepts, in commercial acceptance, or both. A prize of \$35,000 accompanies the award with financial support provided by IBM.

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ACM Grace Murray Hopper Award



Prateek MittalPrinceton University

The Grace Murray Hopper Award is presented to Prateek Mittal for exposing critical vulnerabilities in encrypted internet communication systems and developing multivantage-point domain validation countermeasures.

The unifying theme in Mittal's research is to leverage foundational techniques from network science, comprising graph-theoretical mechanics, data mining, and inferential modelling for tackling privacy and security challenges. By conducting Internet-scale experiments with over 50,000 routers, Mittal's research showed that an adversary can exploit the insecurity of Internet routing to intercept traffic from trusted certificate authorities, and then allow an adversary to obtain a cryptographic key that is vouchsafed by trusted authorities. To mitigate these attacks, Mittal developed the ingenuous idea of trusted certificate authorities validating website domain ownership from multiple vantage points on the Internet. Taken together, his contributions are impacting the integrity of global commerce, financial services, online healthcare, and everyday communications.

The Grace Murray Hopper Award is presented to the outstanding young computer professional of the year, selected on the basis of a single recent major technical or service contribution. The candidate must have been 35 years of age or less at the time the qualifying contribution was made. A prize of \$35,000 accompanies the award. Financial support for the Grace Murray Hopper Award is provided by Microsoft.



ACM Paris Kanellakis Theory and Practice Award



Guy E. Blelloch Carnegie Mellon University



Laxman Dhulipala
University of Maryland



Julian Shun

Massachusetts Institute

of Technology

The Paris Kanellakis Theory and Practice Award is presented to Guy E. Blelloch, Laxman Dhulipala, and Julian Shun for contributions to algorithm engineering, including the Ligra, GBBS, and Aspen frameworks which revolutionized large-scale graph processing on shared-memory machines.

Beginning in 2013, Blelloch, Dhulipala and Shun began to explore how to analyze huge graphs on relatively inexpensive shared-memory multiprocessors. They built a sequence of frameworks (Ligra, Ligra +, Julienne, GBBS, and Aspen) which makes it much easier for programmers to efficiently solve a wide variety of graph problems. They have obtained many truly outstanding results, in which their provably efficient algorithms running on an inexpensive multi-core shared-memory machine are faster than any prior algorithms, even those running on much bigger and more expensive machines. Examples of such results include clustering, clique counting, and various forms of connectivity. These ideas and implementations are being used in industry to handle real-world problems and have also had tremendous impact on research in the field.

The Paris Kanellakis Theory and Practice Award honors specific theoretical accomplishments that have had a significant and demonstrable effect on the practice of computing. This award is accompanied by a prize of \$10,000 and is endowed by contributions from the Kanellakis family, and financial support by ACM's SIGACT, SIGDA, SIGMOD, SIGPLAN, the ACM SIG Project Fund, and individual contributions.



ACM Policy Award



John M. AbowdCornell University (Professor Emeritus)
United States Census Bureau (Retired)

The ACM Policy Award is presented to John Maron Abowd for transformative work in modernizing the US Census Bureau's processing and dissemination of survey data, which serves as a model for privacy-aware management of government collected data. Abowd's work has transformed the government's capacity to improve the accuracy and availability of vital statistical and data resources, while at the same time enhancing citizens' privacy.

Abowd helped create OnTheMap, which enabled external researchers to work with differentially private data from the Longitudinal Employer-Household Dynamics Program. With these frameworks, government agencies have been able to link and share new data sources. He led the development of a disclosure avoidance system (DAS) at the Census, which succeeded in providing data that was confidential but not too homogenous. Abowd's modelling work helped anchor the bureau's data collection efforts during the 2020 Census, and he introduced methods to help the census address missing data issues caused by the COVID-19 pandemic.

The ACM Policy Award recognizes an individual or small group that had a significant positive impact on the formation or execution of public policy affecting computing or the computing community. This can be for education, service, or leadership in a technology position; for establishing an innovative program in policy education or advice; for building the community or community resources in technology policy; or other notable policy activity. The award is accompanied by a \$10,000 prize.



ACM Karl V. Karlstrom Outstanding Educator Award



Alicia Nicki Washington
Duke University



Shaundra DailyDuke University

The Karl V. Karlstrom Outstanding Educator Award is presented to Alicia Nicki Washington and Shaundra Daily for their work towards changing the national computing education system to be more equitable and to combat unjust impacts of computing on society. Washington and Daily have had a critical, wide-reaching impact on educating the broader community through a novel course, a popular training program, and a national alliance.

Washington is credited with developing a Race, Gender, Class, & Computing course—a first-of-its kind course aimed at computer science majors that grounds the discipline of computing in history, sociology, and critical race and gender studies. Building on interest in the course material, Washington joined with Shaundra Daily and graduate student Cecilé Sadler in 2020 to launch the Cultural Competence in Computing (3C) Fellows program—a program in which faculty, staff, postdoctoral researchers, and PhD students from across North America, Africa, Europe, and Australia learn about identity, different forms of oppression, intersectionality, and how they manifest in academic computing environments and technologies. In 2021, Washington and Daily grew the 3C Fellows program into the Alliance for Identity Inclusive Education in Computing (AiiCE), supported by a \$10 million National Science Foundation

The Karlstrom Award is presented annually to an outstanding educator who is: appointed to a recognized educational baccalaureate institution; recognized for advancing new teaching methodologies; effecting new curriculum development or expansion in computer science and engineering; or making a significant contribution to ACM's educational mission. Those teachers with ten years or less experience are given special consideration. The Karlstrom Award is accompanied by a prize of \$10,000.

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ACM Distinguished Service Award



Aidong Zhang University of Virginia

The Distinguished Service Award is presented to Aidong Zhang for her impactful leadership and lasting service to the broad communities of bioinformatics, computational biology, and data mining.

As an ACM member for 29 years, Zhang has devoted tremendous efforts to serving her research community. In 2011, she founded the ACM Special Interest Group on Bioinformatics (ACM SIGBio) and served as Chair and advisor until 2021. She started SIGBio's flagship annual conference ACM BCB: the ACM Conference on Bioinformatics, Computational Biology, and Health Informatics and served as Steering Committee Chair of the conference until 2019. She also served as Steering Committee Member and Chair for ACM/IEEE Transactions on Computational Biology and Bioinformatics (TCBB) from 2012-2016, and as Editor-in-Chief from 2017-2021.

Zhang served on the SIGMOD Executive Committee, was the EiC of ACM SIGMOD-DiSC, Associate Editor for ACM SIGMOD-DiSC and ACM/Springer Multimedia Systems Journal, Technical Program Committee Co-Chair and Treasurer of ACM Multimedia, Co-Chair of the ACM SIGMOD Undergraduate Scholarship Program Committee, and General Co-Chair of SIGKDD 2022. She was chosen by the National Science Foundation to be a Program Director managing federal investments in several computing-related areas from 2015-2018.

The Distinguished Service Award is given on the basis of value and degree of service to the computing community. The contributions are not limited to service to ACM, and should include activities in other computer organizations and should emphasize contributions to the computing community at large.



Outstanding Contribution to ACM Award



Jack W. Davidson
University of Virginia

The Outstanding Contribution to ACM Award is presented to Jack W. Davidson for leadership in and contributions to ACM's Publications Program.

Davidson served as Co-Chair of the ACM Publications Board from 2010 through 2021 and has been the founding chair of the ACM Digital Library Board since 2021. He led several key efforts of paramount importance to ACM, its membership, and the computing community. Davidson also helped guide ACM through the difficult process of moving from a subscription-based free-to-publish model towards full open access.

Davidson challenged the ACM's Publications Board to address some of the longstanding issues in academic publishing such as plagiarism, compromised reviewing, broken confidentiality, and bullying. During his tenure, ACM instituted a new author name change policy applying to transgender authors as well as authors who change their names for reasons of religion or marriage. Davidson is also credited with expanding ACM's publications portfolio with the addition of interdisciplinary journals, a new line of Research and Practice Journals, and the new Proceedings of the ACM series. He also built on earlier efforts to establish standards and badging for the evaluation of artifacts and effects.

The Outstanding Contribution to ACM Award recognizes outstanding service contributions to ACM. Candidates are selected based on the value and degree of service overall, and may be given to up to three individuals each year.

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ACM Athena Lecturer Award



Maja Matarić University of Southern California

The ACM Athena Lecturer Award is presented to Maja Matarić for pioneering contributions to the field of socially assistive robotics, including groundbreaking research, evaluation, and technology transfer, and for fundamental work in human-robot interaction and multi-robot coordination.

Matarić made fundamental contributions to autonomous cognition and interaction. Her early work was the first to demonstrate that behavior-based systems (BBS) could be endowed with spatial representation and have the expressive power to plan and learn. Her well-known system, Toto, was the first BBS to learn maps online and optimize its behavior. It is highly cited and remains a milestone in robot control. She has defined the field of socially assistive robotics (SAR), developing innovative HRI and SAR and algorithms that model user engagement, personality, group moderation, and persuasive interaction dynamics in complex and uncertain real-world environments. Matarić has also been an advocate for underrepresented groups, mentoring early career women via CRA-W and helping to place large numbers of women and members of other underrepresented groups in graduate programs and faculty positions.

The ACM Athena Lecturer Award recognition celebrates women researchers who have made fundamental contributions to computer science. The ACM-W Council, which organized the Athena Lecturer project to honor a preeminent woman computer scientist, chose to identify the honoree with the Greek goddess of wisdom, who, with her sense of purpose and willingness to enter the fray, epitomizes the strength, determination, and intelligence of the Athena Lecturers. The award includes a \$25,000 honorarium provided by Two Sigma.



ACM Doctoral Dissertation Award



Nivedita AroraNorthwestern University

The Doctoral Dissertation Award is presented to Nivedita Arora for their dissertation "Sustainable Interactive Wireless Stickers: From Materials to Devices to Applications," toward a PhD earned at Georgia Institute of Technology.



Gabriele Farina
Massachusetts Institute
of Technology



William Kuszmaul
Harvard University

Honorable Mentions for the Doctoral Dissertation Award are presented to: Gabriele Farina, for their dissertation "Game-Theoretic Decision Making in Imperfect-Information Games: Learning Dynamics, Equilibrium Computation, and Complexity," toward a PhD earned at Carnegie Mellon University; and William Kuszmaul, for their dissertation "Randomized Data Structures: New Perspectives and Hidden Surprises" toward a PhD earned at the Massachusetts Institute of Technology.

The Doctoral Dissertation Award is presented annually to the author(s) of the best doctoral dissertation(s) in computer science and engineering. The Doctoral Dissertation Award is accompanied by a prize of \$20,000 and the Honorable Mention Award is accompanied by a prize totaling \$10,000. Winning dissertations will be published in the ACM Digital Library as part of the ACM Book Series.



ACM Presidential Award



Anand Deshpande
Persistent Systems

Anand Deshpande's long-standing contributions to the broader computing community and to ACM are characterized by his visionary leadership, strategic collaboration, and a commitment to advancing the field of computing science and engineering. He is one of few people who have served all three pillars of the "Triangle of Knowledge" with great success. He has been a respected researcher in his early career, he has created an extremely successful and impactful company in India from scratch, and in addition to his educational efforts as a young faculty member, he has led several concerted efforts to educate the young generation in entrepreneurial thinking in technological areas and beyond.

Furthermore, Deshpande has been a major asset of the computing ecosystem of India, having a tangible, technological, economic, and intellectual impact in his country. He has made significant contributions to the local innovation and educational environments, through think tanks and professional support foundations, but has also contributed to technology policy issues, advising the Indian government on critical topics. His efforts are not confined to computing technology alone, however, but have expanded to addressing medical diseases and other pressing societal challenges.

Deshpande has also demonstrated an unwavering dedication to furthering ACM's mission to enhance the profession and foster a global community of researchers and practitioners. He has been a cornerstone of the ACM India Council, being instrumental in its establishment, serving as its inaugural co-chair and then past president, hosting the Council's office and its staff in his company's premises through the years, and offering constant support to the Council's activities and, in general, to all ACM members in India, whose community has continued to grow and thrive.

The ACM Presidential Award is given at the discretion of the ACM President to individuals whose contributions in computing fall within the goals of the ACM.



ACM Presidential Award



*M. Tamer Özsu*University of Waterloo

M. Tamer Özsu has had long-standing and significant contributions to the computing field and its scientific community in general, as well as to ACM in particular. In addition to his seminal research work on large-scale distributed data management and his emphasis on system building targeting grand societal challenges, he has truly dedicated himself to the education of the young generation, way beyond his own PhD and other students. The books he has co-authored, the encyclopedias he has co-edited, and the series he has curated have all been definitive resources of fundamental and application-oriented data science knowledge, nurturing and inspiring young researchers and practitioners for decades.

In addition to his contributions to the community at large, Özsu has also been a very impactful ACM volunteer leader, both at the level of his home SIG (SIGMOD) and at the horizontal level of the entire ACM. His service to the ACM Publications Board, especially his introduction of the novel ACM Books series, has left its mark on the overall strategy and portfolio of ACM publications.

The ACM Presidential Award is given at the discretion of the ACM President to individuals whose contributions in computing fall within the goals of the ACM.



ACM Fellows

The ACM Fellows Program was established by Council in 1993 to recognize and honor outstanding ACM members for their achievements in computer science and information technology and for their significant contributions to the mission of the ACM. The ACM Fellows serve as distinguished colleagues to whom the ACM and its members look for guidance and leadership as the world of information technology evolves. The 2023 Fellows are listed below. A complete listing is on pages 41-51, and awards.acm.org/fellows.

Aditya Akella, University of Texas Michael Backes, CISPA

Vineet Bafna, University of California, San Diego Maria-Florina Balcan, Carnegie Mellon

University

Nikhil Bansal, University of Michigan **Mikhail Belkin,** University of California, San Diego

Yoshua Bengio, Mila, Université de Montréal Shai Ben-David, University of Waterloo Tim Berners-Lee, WWW Consortium Vaughn Timothy Betz, University of Toronto Ramon Caceres, Google

Chandra Chekuri, University of Illinois, Urbana-Champaign

Haibo Chen, Shanghai Jiao Tong University Yingying (Jennifer) Chen, Rutgers University Kenneth Ward Church, EAI, Northeastern University

Roger B. Dannenberg, Carnegie Mellon University

Xin Luna Dong, Meta Rolf Drechsler, University of Bremen

Wenliang Du, Syracuse University Pradeep Dubey, Intel Corporation

Anja Feldmann, Max Planck Institute and TU Berlin

George Fitzmaurice, Autodesk Canada, Inc. **Fedor Fomin,** University of Bergen

Jeffrey S. Foster, Tufts University Jianfeng Gao, Microsoft

Ian Goldberg, University of Waterloo

Sumit Gulwani, Microsoft

Zhu Han, University of Houston Geoffrey Hinton, University of Toronto Nicole Immorlica, Microsoft Research

Trent Jaeger, Pennsylvania State University
Kenneth Richard Koedinger, Carnegie Mellon

University

Andreas Krause, ETH Zurich

Christopher Ian Kruegel, University of California Santa Barbara

H.T. Kung, Harvard University

Yann LeCun, New York University

David Lo, Singapore Management University

Wenjing Lou, Virginia Tech

Kwan-Liu Ma, University of California, Davis

Wei-Ying Ma, Tsinghua University

Z. Morley Mao, University of Michigan
Deborah McGuinness, Rensselaer Polytechnic

Institute

Gerard G. Medioni, Amazon

Sharad Mehrotra, University of California, Irvine **Seffi Naor**, Technion—Israel Institute of

Technology

Shrikanth Narayanan, University of Southern California

Natasha Noy, Google Research

Corina S. Pasareanu, NASA Ames and Carnegie Mellon University

Massoud Pedram, University of Southern California

Anand Raghunathan, Purdue University Benjamin Raphael, Princeton University

Dana Ron, Tel Aviv University

Tim Roughgarden, Columbia University *David Sankoff,* University of Ottawa

Stefan Saroiu, Microsoft

Albrecht Schmidt, Ludwig Maximilian University of Munich

Björn W. Schuller, Imperial College London,

Technical University of Munich **Phoebe Sengers,** Cornell University

Elaine Shi, Carnegie Mellon University

Noah Snavely, Cornell Tech, Google

Ram D. Sriram, NIST

Steffen Staab, University of Stuttgart, University of Southampton

Alexander Szalay, The Johns Hopkins University

Manik Varma, Microsoft Research India *XiaoFeng Wang,* Indiana University at

Bloomington

Kilian Weinberger, Cornell University Emmett Witchel, The University of Texas

at Austin

Xing Xie, Microsoft Research Asia



Additional Awards

ACM Charles P. "Chuck" Thacker Breakthrough in Computing Award

The ACM Charles P. "Chuck" Thacker Breakthrough in Computing Award recognizes individuals or groups who have made surprising, disruptive, or leapfrog contributions to computing ideas or technologies. Recipients of the award are expected to give the ACM Breakthrough Lecture at a major ACM conference. The award is accompanied by a \$100,000 cash prize, with financial support provided by Microsoft. The next honoree will be recognized in 2025.

ACM Eugene L. Lawler Award for Humanitarian Contributions within Computer Science and Informatics

The ACM Eugene L. Lawler Award for Humanitarian Contributions within Computer Science and Informatics recognizes an individual or group who has made a significant contribution through the use of computing technology. It is given once every two years. The award is accompanied by a prize of \$5,000. The next honoree will be recognized in 2025.

SIAM/ACM Award in Computational Science and Engineering

This biennial endowed award recognizes individuals for outstanding research contributions to the field of computational science and engineering. Their contributions must be publicly available and may belong to any aspect of computational science in its broadest sense. The award includes a certificate and \$5,000 prize. Financial sponsorship is provided by SIAM. The next award will be presented in 2025.

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ACM – IEEE CS Eckert-Mauchly Award



Kunle Olukotun Stanford University

ACM and IEEE Computer Society named Kunle Olukotun, a Professor at Stanford University, as the recipient of the ACM-IEEE CS Eckert-Mauchly Award for contributions and leadership in the development of parallel systems, especially multicore and multithreaded processors. In the early 1990s, Olukotun became a leading designer of a new kind of microprocessor known as a "chip multiprocessor"—today called a "multicore processor." His work demonstrated the performance advantages of multicore processors over the existing microprocessor designs at the time.

Administered jointly by ACM and IEEE Computer Society, an award of \$5,000 is given for contributions to computer and digital systems architecture, where the field of computer architecture encompasses hardware-software design and analysis of computing and digital systems.

ACM - IEEE CS Ken Kennedy Award



Keshav Pingali University of Texas at Austin

ACM and IEEE Computer Society have named Keshav Pingali, the W.A. "Tex" Moncrief Chair of Grid and Distributed Computing at the University of Texas at Austin, as the recipient of the 2023 ACM-IEEE CS Ken Kennedy Award. Pingali is cited for contributions to high-performance parallel computing for irregular algorithms such as graph algorithms. He is also cited for leadership on the Galois Project, which provides a unifying framework for parallelizing both irregular and regular algorithms.

The award honors the substantial research, service, and mentoring contributions of Ken Kennedy (1945-2007), the founder of Rice University's computer science program who was one of the world's foremost experts on high-performance computing. The award includes a \$5,000 honorarium. The recipient is invited to give a presentation at an ACM or IEEE conference of the winner's choosing in the year following the announcement.



ACM – IEEE CS George Michael Memorial HPC Fellowships



James Gregory Pauloski
University of Chicago



Rohan Basu Roy Northeastern University



Hua Huang
Georgia Institute
of Technology

James Gregory Pauloski of the University of Chicago and Rohan Basu Roy of Northeastern University are the recipients of the 2023 ACM-IEEE CS George Michael Memorial HPC Fellowships. Hua Huang of the Georgia Institute of Technology received an Honorable Mention.

Pauloski is recognized for developing systems for optimal HPC resource usage from scalable optimization methods for deep learning training to data fabrics for sophisticated applications spanning heterogeneous resources. Roy is recognized for enhancing the productivity of computational scientists and environmental sustainability of HPC with novel methods and tools exploiting cloud computing and on-premise HPC resources. Huang is recognized for contributions to high performance parallel matrix algorithms and implementations and their application to quantum chemistry calculations.

Endowed in memory of George Michael, one of the founding fathers of the SC Conference series, the ACM – IEEE CS George Michael Memorial Fellowships honor exceptional PhD students throughout the world whose research focus areas are in high-performance computing, networking, storage, and large-scale data analysis. ACM, the IEEE Computer Society, and the SC Conference support this award.

Fellowship recipients are selected each year based on overall potential for research excellence, the degree to which technical interests align with those of the HPC community, academic progress to date, recommendations by their advisor and others, and a demonstration of current and anticipated use of HPC resources. The Fellowship includes a \$5,000 honorarium, plus travel and registration to receive the award at the annual SC conference.



ACM/CSTA Cutler-Bell Prize in High School Computing



Shobhit Agarwal Reedy High School (TX)



Franziska Borneff Hidden Valley High School (VA)



Daniel MathewPoolesville High School (MD)



Kosha Upadhyay Bellevue High School (WA)

The Cutler-Bell Prize recipients will be formally recognized at the Computer Science Teachers Association's annual conference which will be held in July 2024.

The Prize, bestowed by ACM and CSTA (Computer Science Teachers Association), recognizes computer science talent in high school students. The intent of the program is to promote the field of computer science as well as to empower young and aspiring learners to pursue computing challenges outside of the traditional classroom environment. The award was established by David Cutler and Gordon Bell and includes a \$10,000 scholarship for each selected student. The award is financially supported by an endowment from the Gordon Bell and David Cutler Endowment Fund.



ACM Gordon Bell Prize

An eight-member team drawn from American and Indian institutions was named recipient of the 2023 ACM Gordon Bell Prizefor the project, "Large-Scale Materials Modeling at Quantum Accuracy: Ab Initio Simulations of Quasicrystals and Interacting Extended Defects in Metallic Alloys."

The members of the team are: Sambit Das (University of Michigan), Bikash Kanungo (University of Michigan), Vishal Subramanian, (University of Michigan), Gourab Panigrahi (Indian Institute of Science, Bangalore), Phani Motamarri (Indian Institute of Science, Bangalore), David Rogers (Oakridge National Laboratory), Paul M. Zimmerman (University of Michigan), and Vikram Gavini (University of Michigan).

The Gordon Bell Prize recognizes outstanding achievement in high-performance computing. The purpose is to track the progress of parallel computing with particular emphasis on rewarding innovation in applying high performance computing to applications in science. The award, presented during the annual SC Conference, includes \$10,000 in prize money. The prize is endowed by Gordon Bell, a pioneer in high-performance and parallel computing.

ACM Gordon Bell Prize for Climate Modelling

A nineteen-member team was named recipient of the inaugural ACM Gordon Bell Prize for Climate Modelling for their project, "The Simple Cloud-Resolving E3SM Atmosphere Model Running on the Frontier Exascale System." The new award aims to recognize innovative parallel computing contributions toward solving the global climate crisis.

The members of the team are: Mark A. Taylor, Luca Bertagna, Conrad Clevenger, James G. Foucar, Oksana Guba, Benjamin R. Hillman, Andrew G. Salinger (all of Sandia National Laboratories); Peter M. Caldwell, Aaron S. Donahue, Noel Keen, Christopher R. Terai, Renata B. McCoy, David C. Bader (all of Lawrence Livermore National Laboratory); Jayesh Krishna, Danqing Wu (both of Argonne National Laboratory); Matthew R. Norman, Sarat Sreepathi (both of Oakridge National Laboratory); James B. White III (Hewlett Packard Enterprise); and L. Ruby Leung (Pacific Northwest National Laboratory).

The ACM Gordon Bell Prize for Climate Modelling aims to recognize innovative parallel computing contributions toward solving the global climate crisis. A cash prize in the amount of \$10,000 accompanies the award, which was conceived and funded by Gordon Bell. Recipients of the ACM Gordon Bell Prize for Climate Modelling will have their research published in The International Journal of High Performance Computing Applications (IJHPCA).

ACM Regional Awards

ACM India Doctoral Dissertation Award



Pranjal DuttaChennai Mathematical Institute

The ACM India Doctoral Dissertation Award is presented to Pranjal Dutta for his dissertation titled "A Tale of Hardness, De-Randomization and De-Bordering in Complexity Theory." toward a PhD earned at Chennai Mathematical Institute. Pranjal's dissertation makes breakthrough contributions in the study of hardness, approximation and derandomization of algebraic circuits, and develops new mathematical tools, laying the foundation for future developments in algebraic complexity theory.



Jogendra Nath Kundu Indian Institute of Science

Honorable Mention for the ACM India Doctoral Dissertation Award is presented to Jogendra Nath Kundu, for his dissertation "Self-Supervised Domain Adaptation Framework for Computer Vision Tasks" toward a PhD earned at the Indian Institute of Science

The ACM India Doctoral Dissertation Award recognizes the best doctoral dissertation from a degree-awarding institution based in India, and is accompanied by a prize of ₹ 200,000. The winning dissertation will be published in the ACM Digital Library. This award is additionally supported by the Tata Consultancy Services.



ACM India Early Career Researcher Award



Siddharth Barman
Indian Institute of Science (IISc) Bangalore

For pioneering contributions to important problems at the intersection of computer science and microeconomics, in particular, to algorithmic game theory and to the theory of fair and efficient resource allocation.

The ACM India Early Career Researcher (ECR) Award recognizes individuals in early stages of their careers who have made fundamental, innovative, and impactful contributions to the computing field while primarily working in India. The award carries a prize of ₹15 lakhs (approximately USD \$20,000). Financial support for this award is provided by the Persistent Foundation.

ACM India Outstanding Contributions in Computing by a Woman



Nutan LimayeIT University of Copenhagen

For her outstanding contributions, while in India, to computational complexity, and her active encouragement and mentoring of women in the field.

The ACM India Outstanding Contributions in Computing by a Woman (OCCW) Award recognizes women professionals who have made fundamental, innovative, impactful contributions to the computing field primarily working in India. The award carries a prize of ₹7 lakhs (approximately USD \$10,000). Financial support for this award is provided by Google.

ACM India Outstanding Contribution to Computing Education Award



Sudip MisraIndian Institute of Technology, Kharagpur

For impactful contributions to IoT and Networks education through online courses, textbooks, short-term courses, research, and laboratory development.

The ACM India Outstanding Contribution to Computing Education (OCCE) Award recognizes individuals who have made fundamental, innovative and impactful contributions to computing education in India. The award carries a prize of ₹7 lakhs (approximately USD \$10,000). Financial support for this award is provided by Microsoft Research India.

CCF/ACM Award for Artificial Intelligence



*Hang Li*ByteDance

The 2023 CCF-ACM Award for Artificial Intelligence is presented to Hang Li of ByteDance for his distinguished contributions to information retrieval, natural language processing, and statistical machine learning.

The CCF-ACM Artificial Intelligence Award, established by the Chinese Computer Federation and ACM, is awarded to professionals who have made outstanding contributions to the theory, technology, or application of artificial intelligence and worked in China at the time of the award.

ACM China Doctoral Dissertation Award



Peng NiCentral South University



Zili MengHong Kong University of
Science and Technology

The ACM China Doctoral Dissertation Award is presented to: Peng Ni for their dissertation toward a PhD earned at Central South University; and Zili Meng for their dissertation toward a PhD earned at Hong Kong University of Science and Technology.

The ACM China Doctoral Dissertation Award recognizes the best doctoral dissertation(s) in computer science and engineering from a degree-awarding institution based in China, for the purpose of encouraging dedicated research and academic achievement. The award is accompanied by a prize of ¥10,000.

ACM China Rising Star Award



Meng Jin
Shanghai Jiao Tong University



Wenguan Wang Zhejiang University

The China Rising Star Award is presented to: Meng Jin for their dissertation toward a PhD earned at Shanghai Jiao Tong University; and Wenguan Wang for their dissertation toward a PhD earned at Zhejiang University.

The ACM China Rising Star Award is given annually to recognize rising stars in the Chinese computing community who demonstrate outstanding potential for research in the field of computing. The selection is based on the impact of the candidate's work in the field in creating promising new ideas, paradigms, and novel systems which are related to computer or communications systems, which may be analytical, empirical or experimental in nature. Besides the honor, a prize of ¥10,000, will also be presented to each winner.



IPSJ/ACM Award for Early Career Contributions to Global Research



Yuki Koyama
National Institute of Advanced Industrial
Science and Technology (AIST)

The IPSJ/ACM Award for Early Career Contributions to Global Research is presented to Yuki Koyama, National Institute of Advanced Industrial Science and Technology (AIST), for his expertise in mathematical optimization and interaction design which have has advanced the ability of end-users to discover their ideal design solutions. Notably, he invented an innovative extension of Bayesian optimization, enabling efficient human-in-the-loop design optimization frameworks.

The IPSJ/ACM Award for Early Career Contributions to Global Research recognizes technical achievement by an early to mid-career researcher (10 years or less after receiving his/her doctoral degree). The contributions should be through an international collaboration or a collaboration for which there is reasonable expectation of future international collaboration.



Awards Committee Co-Chairs



Roy Levin roy@levin.net



John R. White white@acm.org

ACM Award Nomination Submission Procedures

Nominations for the awards presented at the June Awards Banquet are due in late Fall, but other awards are presented throughout the year.

For ACM Fellow, the deadline is **September 7, 2024**For ACM Distinguished Member, the deadline is **August 1, 2024**.
For ACM Senior Member, the deadline is **September 3, 2024**.

Nomination forms and guidelines will be found on the awards site under "Advanced Grades of Membership" https://awards.acm.org/advanced-member-grades.

For information on the nominations process and deadline for each award, please visit: https://awards.acm.org/award-nominations

Please visit **awards.acm.org**, for additional details about the ACM awards program, or contact:

Jade Morris ACM Awards Committee Liaison jade.morris@acm.org

ACM Special Interest Group Awards

Additional information, including descriptions of the SIG Awards, nomination procedures, where the award is presented, and any prizes attached to the award, is available at www.acm.org/sigs/sig-awards.

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Doctoral Dissertation

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Samantika Sury

Science and Engineering (Biennial)

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ACM Members:

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Bobby Schnabel

Gordon Bell Prize

Taisuke Boku

John Taylor

University of Tsukuba Members: Barbara Chapman Judith Hill Wolfgang Nagel Amanda Randles Suzanne Shontz Kenjiro Taura

Gordon Bell Prize for Climate Modelling

John Taylor Australian National University John.Taylor@anu.edu.au

Members: Ilkay Altintas Jack Dongarra Ian Foster Satoshi Matsuoka

Regeneron International Science and Engineering Fair

Tom Yeh Colorado University tom.yeh@colorado.edu

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Past Recipients

A.M. Turing Award

1966 A.J. Perlis

1967 Maurice V. Wilkes

1968 Richard Hamming

1969 Marvin Minsky

1970 J.H. Wilkinson

1971 John McCarthy

1972 E.W. Dijkstra

1973 Charles W. Bachman

1974 Donald E. Knuth

1975 Allen Newell

1975 Herbert A. Simon

1976 Michael O. Rabin

1976 Dana S. Scott

1977 John Backus

1978 Robert W. Floyd

1979 Kenneth E. Iverson

1980 C. Antony R. Hoare

1981 Edgar F. Codd

1982 Stephen A. Cook

1983 Ken Thompson

1983 Dennis M. Ritchie

1984 Niklaus Wirth

1985 Richard M. Karp

1986 John Hopcroft

1986 Robert Tarjan

1987 John Cocke

1988 Ivan Sutherland

1989 William (Velvel) Kahan

1990 Fernando J. Corbató

1991 Robin Milner

1992 Butler Lampson

1993 Juris Hartmanis

1993 Richard E. Stearns

1994 Edward A. Feigenbaum

1994 Raj Reddy

1995 Manuel Blum

1996 Amir Pnueli

1997 Douglas Engelbart

1998 James N. Gray

1999 Frederick P. Brooks, Jr.

2000 Andrew C. Yao

2001 Ole-Johan Dahl

2001 Kristen Nygaard

2002 Leonard Adleman

2002 Ronald Rivest

2002 Noriala Nives

2002 Adi Shamir

2003 Alan Kay

2004 Vinton G. Cerf

2004 Robert E. Kahn

2005 Peter Naur

2006 Frances E. Allen

2007 Edmund Clarke

2007 E. Allen Emerson

2007 Joseph Sifakis

2008 Barbara Liskov

2009 Charles Thacker 2010 Leslie G. Valiant

2011 Judea Pearl

2012 Shafi Goldwasser

2012 Silvio Micali

2013 Leslie Lamport

2014 Michael Stonebreaker

2015 Whitfield Diffie

2015 Martin E. Hellman

2016 Sir Tim Berners-Lee

2017 John Hennessy

2017 David Patterson

2010 1/ 1 D :

2018 Yoshua Bengio

2018 Geoffrey Hinton

2018 Yann LeCun

2019 Edwin Catmull

2019 Patrick Hanrahan

2020 Alfred Vaino Aho

2020 Jeffrey David Ullman

2021 Jack J. Dongarra

2022 Bob Metcalfe

ACM Prize in Computing*

2007 Daphne Koller

2008 Jon Kleinberg

2009 Eric Brewer

2010 Frans Kaashoek

2011 Sanjeev Arora

2012 Jeffrey Dean

2012 Sanjay Ghemawat

2013 David Blei

2014 Dan Boneh

2015 Stefan Savage

2016 Alexei A. Efros

2017 Dina Katabi

2018 Shwetak Patel

2019 David Silver

2020 Scott Aaronson

2021 Pieter Abbeel

2022 Yael Tauman Kalai

* Formerly the ACM-Infosys Award in the Computing Sciences

ACM Charles P. "Chuck" Thacker Breakthrough in Computing Award (Biennial)

2018 Mendel Rosenblum

2020 Michael Franz

2022 David B. Papworth

ACM Frances E. Allen Award for Outstanding Mentoring (Biennial)

2021 Carla E. Brodley

Software System Award

1983 **UNIX**

Ken Thompson
Dennis M. Ritchie

1984 **Xerox Alto Systems**Butler W. Lampson

Past Recipients

Robert W. Taylor Charles P. Thacker 1985 **VisiCalc**

Daniel Bricklin Robert Frankston

1986 **TeX**Donald E. Knuth

1987 **SMALLTALK**Alan C. Kay
Daniel H.H. Ingalls, Jr.
Adele Goldberg

1988 SystemR

Donald Chamberlin

James Gray

Raymond Lorie

Gianfranco Putzolu

Patricia Selinger

1988 **INGRES**Gerald Held
Michael Stonebraker
Eugene Wong

Irving Traiger

1989 **PostScript**John E. Warnock
Charles M. Geschke
William H. Paxton
Douglas K. Brotz

Edward A. Taft 1990 NLS

> Douglas C. Engelbart William K. English Johns F. Rulifson

1991 **TCP/IP**Vinton G. Cerf
Robert E. Kahn

1992 Interlisp
Daniel G. Bobrow
Richard R. Burton
L. Peter Deutsch

Ronald M. Kaplan Larry Masinter Warren Teitelman

1993 **Sketchpad** Ivan Sutherland

1994 Remote Procedure Call
Andrew Birrell

Bruce Nelson 1995 **World-WideWeb**

Tim Berners-Lee Robert Cailliau

1995 NCSA Mosaic Marc Andreessen Eric Bina

1996 **no award given** 1997 **Tcl/tk**

1998 **S System**John M. Chambers

John Ousterhout

1999 Apache
Brian Behlendorf
Roy T. Fielding
Rob Hartill
David Robinson
Cliff Skolnick
Randy Terbush
Robert S. Thau
Andrew Wilson

2000 no award given2001 SPIN VerificationSystemGerard Holzmann

2002 **Java**James A. Gosling
2002 **Make**

Stuart Feldman 2004 **SNP**

Raghuram Bindignavle Simon S. Lam Shaowen Su Thomas Y.C. Woo

2005 **Boyer-Moore Theorem Prover**Robert S. Boyer

Matt Kaufmann

J Strother Moore

2006 **Eiffel** Bertrand Meyer

2007 Statemate
David Harel
Hagi Lachover
Amnon Naamad
Amir Pnueli
Michal Politi
Rivi Sherman
Mark Trakhtenbrot
Aron Trauring

2008 Gamma Parallel
Database System
David J. DeWitt
Robert Gerber
Shahram
Ghandeharizadeh
Goetz Graefe
Michael Heytens
Hui-I Hsiao
Murali M. Krishna
Jeffrey F. Naughton
Donovan A. Schneider

2009 VMware Workstation 1.0
Edouard Bugnion
Scott Devine
Mendel Rosenblum
Jeremy Sugarman

Anoop Sharma

2010 GroupLens

Collaborative Filtering

Edward Wang



Recommender Systems

Peter Bergstrom Lee Gordon Jonathan Herlocker Neophytos Iacovou Joseph A. Konstan

Shyong (Tony) Lam

David Maltz Sean McNee

Bradley Miller

Paul Resnick

John Riedl Mitesh Suchak

2011 Eclipse

Gregory Adams
John Duimovich
Erich Gamma
Kevin Haaland
Julian Jones
Philippe Mulet
Steve Northover
Dave Thomson
John Wiegand

2012 **LLVM**

Vikram Adve Evan Cheng Chris Lattner

2013 **Coa**

Bruno Barras Yves Bertot Pierre Castéran Thierry Coquand Jean-Christophe Filliâtre Hugo Herbelin Gerard P. Huet Chetan Murthy

Christine Paulin-

Mohring

2014 MACH

Rick Rashid Avadis (Avie) Tevanian

2015 GCC (GNU Compiler Collection)

Richard Stallman

2016 Andrew File System (AFS)

John H. Howard Michael L. Kazar

David A. Nichols Sherri M. Nichols Mahadev Satyanarayanan Robert N. Sidebotham Alfred Z. Spector

2017 Project Jupyter

Michael J. West

(posthumously)

Fernando Pérez
Brian E. Granger
Min Ragan-Kelley
Paul Ivanov
Thomas Kluyver
Jason Grout
Matthias Bussonnier
Damián Avila
Steven Silvester
Jonathan Frederic
Kyle Kelley
Jessica Hamrick

Carol Willing

Sylvain Corlay Peter Parente

2018 Wireshark

Fernando Pérez

2019 **DNS**

Paul Mockapetris

2020 Berkeley DB

Keith Bostic Michael Olson Margo Seltzer

2021 CompCert

Sandrine Blazy
Zaynah Dargaye
Jacques-Henri Jourdan
Xavier Leroy
Michael Schmidt
Bernhard Schommer
Jean-Baptiste Tristan

2022 seL4 microkernel

Gernot Heiser
Gerwin Klein
Harvey Tuch
Kevin Elphinstone
June Andronick
David Cock
Philip Derrin
Dhammika Elkaduwe
Kai Engelhardt
Toby Murray
Rafal Kolanski
Michael Norrish
Thomas Sewell
Simon Winwood

Programming Systems and Languages Paper Award*

Kurt Walk 1971 Peter J. Denning 1971 Edsger W. Dijkstra 1971 Jan Gecsei Richard L. Mattson

1971 Peter Lucas

Donald R. Slutz

Irving Traiger
1971 John C. Reynolds

1972 no award given



1973 C.A.R. Hoare 1974 Zohar Manna Stephen Ness Jean Vuillemin 1975 Daniel G. Bobrow Ben Wegbreit 1975 Dennis Ritchie Kenneth Thompson 1976 John Cocke Frances F. Allen 1977 David Gries Susan Owicki 1978 Niklaus Wirth 1979 David L. Parnas 1980 no award given 1981 no award given 1982 James Grav Paul McJones Michael Blasgen **Bruce Lindsay** Raymond Lorie Thomas Price

Irving Traiger

Gianfranco Putzolu

Grace Murray Hopper Award

1973 Lawrence Breed 1973 Richard Lathwell

1971 Donald E. Knuth

1972 Paul E. Dirksen

1972 Paul H. Cress

1973 Roger Moore

1974 George N. Baird

1975 Allen L. Scherr

1976 Edward H. Shortliffe

1977 no award given

1978 Raymond Kurzweil

1979 Stephen Wozniak 1980 Robert M. Metcalfe 1981 Daniel S. Bricklin 1982 Brian K. Reid 1984 Daniel H.H. Ingalls, Jr. 1985 Cordell Green

1986 William N. Joy 1987 John K. Ousterhout

1988 Guy L. Steele 1989 W. Daniel Hillis

1990 Richard Stallman 1991 Feng-hsiung Hsu

1992 no award given

1993 Bjarne Stroustrup

1994 no award given 1995 no award given

1996 Shafrira Goldwasser

1997 no award given 1998 no award given

1999 Wen-mei Hwu

2000 Lydia Kavraki

2001 George Necula 2002 Ramakrishnan Srikant

2003 Stephen W. Keckler

2004 Jennifer Rexford

2005 Omer Reingold

2006 Daniel Klein

2007 Vern Paxson

2008 Dawson Engler

2009 Tim Roughgarden

2010 Craig Gentry

2011 Luis von Ahn

2012 Martin Casado

2012 Dina Katabi

2013 Pedro Felzenszwalb

2014 Sylvia Ratnasamy

2015 Brent Waters

2016 Jeffrey Michael Heer

2017 Amanda Randles

2018 Constantinos Daskalakis

Michael J. Freedman

2019 Maria Florina Balcan2020 Shyamnath Gollakota

2021 Raluca Ada Popa

2022 Mohammad Alizadeh

Allen Newell Award

1994 Frederick P. Brooks, Jr.

1995 Joshua Lederberg

1996 no award given

1997 Carver Mead 1998 Saul Amarel

1999 Nancy Leveson

2000 Lotfi Zadeh

2001 Ruzena Baicsv

2002 Peter Chen

2003 David Haussler

2003 Judea Pearl

2004 Richard P. Gabriel 2005 Jack Minker

2006 Karen Spärck Jones

2007 Leonidas Guibas

2008 Joseph Y. Halpern

2008 Barbara J. Grosz 2009 Michael I. Jordan

2010 Takeo Kanade

2011 Stephanie Forrest

2012 Yoav Shoham

2012 Moshe Tennenholtz

2013 no award given

2014 Jon Kleinberg

2015 Eric Horvitz

2016 Jitendra Malik

2017 Margaret A. Boden

2018 Henry Kautz

2019 Lydia Kavraki

2019 Daphne Koller

^{*} This award was replaced in 1983 by the Software System Award

2020 Hector Levesque 2020 Moshe Vardi 2021 Carla Gomes

2022 Bernhard Schölkopf

Stuart J. Russell

Paris Kanellakis Theory and Practice Award

1996 Leonard Adleman

1996 Whitfield Diffie

1996 Martin Hellman

1996 Ralph Merkle

1996 Ronald Rivest

1996 Adi Shamir

1997 Abraham Lempel

1997 Jacob Ziv

1998 Randal Bryant

1998 Edmund M. Clarke, Jr.

1998 F. Allen Emerson

1998 Kenneth McMillan

1999 Daniel Sleator

1999 Robert Tarjan

2000 Narendra Karmarkar

2001 Gene Myers

2002 Peter A. Franaszek

2003 Gary Miller

2003 Michael Rabin

2003 Robert Solovav

2003 Volker Strassen

2004 Yoav Freund

2004 Robert Schapire

2005 Gerard Holzmann

2005 Robert Kurshan

2005 Moshe Vardi

2005 Pierre Wolper

2006 Robert K. Brayton

2007 Bruno Buchberger

2008 Corinna Cortes

2008 Vladimir Vapnik

2009 Mihir Bellare

2009 Phillip Rogaway

2010 Kurt Mehlhorn

2011 Hanan Samet

2012 Andrei Broder

2012 Moses Charikar

2012 Piotr Indvk

2013 Robert Blumofe

2013 Charles Leiserson

2014 James Demmel

2015 Michael G. Luby

2016 Amos Fiat

2016 Moni Naor

2017 Scott J. Shenker

2018 Pavel Pevzner

2019 Noga Alon

2019 Phillip Gibbons

2019 Yossi Matias

2019 Mario Szegedy

2020 Yossi Azar

2020 Andrei Broder

2020 Anna Karlin

2020 Michael Mitzenmacher

2020 Eli Upfal

2021 Avrim Blum

Irit Dinur

Cynthia Dwork

Frank McSherry

Kobbi Nissim

Adam Davison Smith

2022 Michael Burrow

Paolo Ferragina

Giovanni Manzini

Karl V. Karlstrom
Outstanding Educator

Award

1989 C.L. Liu

1990 Gerald Jay Sussman

1991 David A. Patterson

1992 David Harel

1993 Andries van Dam

1994 Andrew Tanenbaum

1995 David Gries

1996 Peter Denning

1997 Jeffrey Ullman

1998 Avi Silberschatz

1999 Randy H. Katz

2000 Yale Patt

2001 Nell B. Dale

2002 John T. Gorgone

2003 Sartaj Sahni

2004 no award given

2005 Stuart J. Russell

2006 no award given

2007 Randy Pausch

2008 John Hopcroft

2009 Matthias Felleisen

2010 Barbara Fricson

2010 Mark Guzdial

2011 Hal Abelson

2012 Eric S. Roberts

2013 Susan Rodger

2014 William A. Wulf

2015 Armando Fox

2016 Owen Astrachan

2017 Judith Gal-Ezer

2018 Robert Sedgewick

2019 Mordechai Ben-Ari

2020 Andrew McGettrick

2021 Mark Allen Weiss

2022 Michael E. Caspersen



Eugene L. Lawler Award for Humanitarian Contributions within Computer Science and Informatics (Biennial)

1999 Antonia Stone 2001 John Blitch 2003 Patrick Ball 2005 Albrecht Ehrensperger 2005 Solomon Mbuguah 2005 Ernest Siva

2009 Gregory Abowd2012 Thomas Bartoschek

2007 Randolph Y. Wang

2012 Johannes Schöning

2014 Robin Roberson Murphy 2016 Ken Banks 2018 Meenakshi Balakrishnan

2020 Richard Anderson 2022 Jelani Nelson

Distinguished Service Award

1971 J. Don Madden 1972 George E. Forsythe (posthumously)

1970 Franz I. Alt

1973 William Atchison 1974 Saul Gorn

1975 John W. Carr III

1976 Richard G. Canning

1977 Thomas B. Steel, Jr.

1978 Eric A. Weiss

1979 Carl Hammer

1980 Bernard Galler

1981 Aaron Finerman

1982 Anthony Ralston 1983 Grace Murray Hopper 1984 Saul Rosen 1985 Jean Sammet 1986 Clair Maple

(posthumously) 1987 Frederick P. Brooks, Jr.

1988 Charles L. Bradshaw

1989 Peter J. Denning

1990 Walter M. Carlson

1991 Gerald L. Engel

1992 Joyce Currie Little

1993 J.A.N. Lee

1994 no award given

1995 Doris Lidtke

1996 Hal Berghel

1997 David H. Brandin

1998 no award given 1999 Anita Borg

2000 Peter Wegner

2001 Won Kim

2002 Raymond E. Miller

2003 Ruzena Bajcsy

2004 E.G. Coffman

2005 Mary Jane Irwin 2006 Susan L. Graham

2007 David A. Patterson

2008 Telle Whitney

2009 Edward Lazowska

2010 Reinhard Wilhelm 2011 William A. Wulf

2012 Mateo Valero

2012 Mateo Valeto 2013 Gerhard Goos

2013 Gerhard Goos

2013 Juris Hartmanis 2013 Jan van Leeuwen

2014 Dame Wendy Hall

2014 Dame Wendy Haii

2015 Ron Perrott

2016 Leonard J. Shustek 2017 Janice Cuny

2017 Janice Cuny

2018 Victor Bahl

2019 Michael Ley

2020 Jennifer T. Chayes

2021 Erik Altman

2022 Ramesh Jain

Doctoral Dissertation Award

1982 Charles E. Leiserson

1983 Thomas W. Reps

1984 Manolis G.H. Katevenis

1985 John R. Ellis

1986 Johan Torkel Hastad

1986 Ketan D. Mulmuley

1987 John Canny

1988 Mauricio Karchmer

1989 Vijay Saraswat

1990 Hector Geffner

1990 David Heckerman

1991 Robert Schapire

1992 Kenneth McMillan

1992 Mendel Rosenblum

1993 Madhu Sudan

1994 David Karger

1994 T.V. Raman

1995 Sanjeev Arora

1995 Daniel A. Spielman

1996 Xiaoyuan Tu

1996 Carl Waldspurger

1997 Steven McCanne

1998 Hari Balakrishnan

1999 Dieter van Melkebeek

2000 Salil Vadhan

2001 Ion Stoica

2002 Venkatesan

Guruswami

2003 AnHai Doan

2004 Boaz Barak

2005 Ben Liblit

2006 Yi-Ren Ng

2007 Sergey Yekhanin

2008 Constantinos



Daskalakis
2009 Craig Gentry
2010 Bryan Parno
2011 Seth Cooper
2012 Shyamnath Gollakota
2013 Sanjam Garg
2014 Matei Zaharia
2015 Julian Shun
2016 Haitham Hassanieh
2017 Aviad Rubenstein
2018 Chelsea Finn
2019 Dor Minzer
2020 Chuchu Fan
2021 Manish Raghayan

Outstanding Contribution to ACM Award

2022 Aayush Jain

1976 W. Smith Dorsey 1976 Bruce W. Van Atta 1978 Kathleen A. Wagner 1979 M. Stuart Lynn 1981 J.A.N. Lee 1982 Fred H. Harris 1983 Richard Austing 1983 Seymour J. Wolfson 1984 Orrin E. Taulbee 1985 Jack Minker

1986 Herbert Maisel

1987 Edward G. Coffmann, Jr.

1988 Thomas A. DeFanti 1989 Monroe (Monty)

Newborn

1990 William Poucher

1991 Allen Tucker

1992 James M. Adams

1992 Lorraine Borman

1992 Peter Neumann

1993 John H. Esbin 1993 Frank L. Friedman 1994 John R. White

1994 A. Joseph Turner

1995 Robert Aiken

1996 Stuart H. Zweben

1997 Robert L. Ashenhurst

1998 Peter J. Denning

1999 Ronald Boisvert

2000 Hal Berghel

2001 Barbara Simons

2002 Patricia M. Ryan

2003 Mark Scott Johnson

2004 Richard T. Snodgrass

2005 Don Gotterbarn

2006 David S. Wise

2007 Robert A. Walker

2008 Wayne Graves

2008 Bernard Rous

2009 Moshe Y. Vardi

2010 Joseph S. DeBlasi

2011 Calvin C. (Kelly) Gotlieb

2012 Zvi Kedem

2013 Donna Cappo

2013 Russell Harris

2014 Dame Wendy Hall

2015 no award given

2016 Valerie Barr

2017 Stephen Bourne

2018 Chris Stephenson

2019 Arati Dixit

2020 Chris L. Hankin

2022 Joseph A. Konstan

ACM-IEEE CS Eckert-Mauchly Award

1979 Robert S. Barton 1980 Maurice V. Wilkes 1981 Wesley A. Clark

1982 C. Gordon Bell

1983 Tom Kilburn

1984 Jack B. Dennis

1985 John Cocke

1986 Harvey G. Cragon

1987 Gene M. Amdahl

1988 Daniel P. Siewiorek

1989 Seymour Cray

1990 Kenneth E. Batcher

1991 Burton J. Smith

1992 Michael J. Flynn

1993 David J. Kuck

1994 James E. Thornton

1995 John Crawford

1996 Yale Patt

1997 Robert Tomasulo

1998 Tadashi Watanabe

1999 James E. Smith

2000 Edward Davidson

2001 John Hennessy

2002 B. Ramakrishna (Bob)

Rau

2003 Joseph A. (Josh) Fisher

2004 Frederick P. Brooks, Jr.

2005 Robert P. Colwell

2006 James Pomerene

2007 Mateo Valero

2008 David A. Patterson

2009 Joel Emer

2010 William Dally

2011 Gurindar Sohi

2012 Algirdas Avizienis

2013 James Goodman

2014 Trevor Mudge

2015 Norman Jouppi

2016 Uri Weiser

2017 Charles P. "Chuck"
Thacker



2018 Susan Eggers 2019 Mark Hill 2020 Luiz André Barroso 2021 Margaret Martonosi 2022 Mark Horowitz 2023 Kunle Olukotun

ACM-IEEE CS Ken Kennedy **Award**

2009 Francine Berman 2010 David J. Kuck 2011 Susan L. Graham 2012 Mary Lou Soffa 2013 Jack Dongarra 2014 Charles Leiserson 2015 Katherine Yelick 2016 William D Gropp 2017 Jesús Labarta 2018 Sarita Adve 2019 Geoffrey Fox 2020 Vivek Sarkar 2021 David A. Abramson 2022 Ian Foster 2023 Keshav Pingali

SIAM-ACM Award in Computational Science and Engineering (Biennial)

2003 John B. Bell 2003 Phillip Colella 2004 Achi Brandt 2007 Chi-Wang Shu 2009 Cleve Moler 2011 J. Tinsley Oden 2013 Linda Petzold 2015 Sataish Balay

2015 William Gropp 2015 Matthew Knepley

2015 Jed Brown

2015 Lois Curfman McInnes 2015 Barry Smith 2015 Hong Zhang 2017 Thomas J. R. Hughes 2019 Jack Dongarra 2021 George Karniadakis 2022 SUNDIALS Core **Development Group**

ACM Presidential Award 1985 Robert F. Kahn 1987 Kent Curtis 1998 John Gage 2002 Calvin C. Gotlieb 2006 Andreas Bechtolsheim 2006 Janice E. Cunv 2006 Edward Lazowska 2007 Eugene Spafford 2008 Stephen R. Bourne 2008 Patricia M. Ryan 2008 Barbara Ryder 2008 Moshe Vardi 2010 Joseph Mathai 2010 Elaine Weyuker 2013 Fabrizio Gagliardi 2013 Yunhao Liu

2013 P.J. Narayanan 2014 Mehran Sahami

2016 Gerhard Schimpf 2016 Chris Stephenson 2017 Moshe Vardi 2018 Don Gotterbarn

2015 John R. White

2018 Andrew McGettrick 2018 Fabrizio Gagliardi

2019 Vinton G. Cerf 2022 Dame Wendy Hall

ACM Athena Lecturer Award*

2006 Deborah Estrin 2007 Karen Spärck Jones 2008 Shafrira Goldwasser 2009 Susan Eggers 2010 Mary Jane Irwin 2011 Judith S. Olson 2012 Nancy Lynch 2013 Katherine Yelick 2014 Susan Dumais 2015 Jennifer Widom 2016 Jennifer Rexford 2017 Lvdia E. Kavraki 2018 Andrea Goldsmith 2019 Elisa Bertino 2020 Sarit Kraus 2021 Ayanna Howard

2023 Margo Seltzer * Formerly the ACM-W Athena Lecturer Award

2022 Eva Tardos

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