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Association for
Computing Machinery

Advancing Computing as a Science & Profession

ACM

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**Association for
Computing Machinery**

Advancing Computing as a Science & Profession

Contents



ACM Awards Reception and Banquet, June 2007	2
Introduction	3
A.M. Turing Award	4
ACM – Infosys Foundation Award in the Computing Sciences	5
ACM – AAAI Allen Newell Award	5
Software System Award	6
Grace Murray Hopper Award	7
Paris Kanellakis Theory and Practice Award	7
Karl V. Karlstrom Outstanding Educator Award	8
Eugene L. Lawler Award for Humanitarian Contributions within Computer Science and Informatics	8
Distinguished Service Award	9
ACM – IEEE CS Eckert-Mauchly Award	9
ACM-W Athena Lecturer Award	9
Outstanding Contribution to ACM Award	10
The SIAM/ACM Award in Computational Science and Engineering	10
ACM Gordon Bell Prize	10
Doctoral Dissertation Award	11
ACM Presidential Award	12
ACM International Collegiate Programming Contest	14
ACM Student Research Competition	14
Intel International Science and Engineering Fair	14
ACM Fellows	15
ACM Award Nomination Submission Procedures	16
ACM Special Interest Group Awards	17
2007 ACM Award Subcommittee Chairs	19
2008 ACM Award Subcommittee Chairs and Members	20
Past Recipients	22
ACM Fellows	25
In Memoriam, ACM Fellows	29



ACM Awards Reception & Banquet



*Hotel del Coronado
San Diego, California
June 9, 2007*



2006 ACM A.M.
Turing Award
Recipient Fran Allen
with (left to right)
ACM President
Stuart Feldman,
Intel's Vice President
of Research Andrew
A. Chien, and ACM
CEO John R. White

David A. Patterson
arrives at the ACM
Awards Reception
with his wife Linda



ACM 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 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.

ACM's awards celebrate our long tradition of honoring those whose contributions have impacted our world for the better in countless ways. 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 16 in this booklet.

The awards included in this overview were honored at the 2008 ACM Awards Banquet on June 21, 2008, at the Palace Hotel in San Francisco, California.

More information on the ACM Awards Programs is available at <http://awards.acm.org/html/awards.cfm>, including a downloadable version of this booklet, as well as a companion piece featuring the complete award citations.

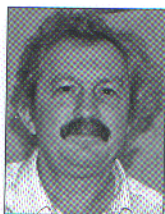
A.M. Turing Award



Edmund M. Clarke
Carnegie Mellon University



E. Allen Emerson
University of Texas at Austin



Joseph Sifakis
CNRS, Verimag Laboratory



The A.M. Turing Award is presented to Edmund M. Clarke, E. Allen Emerson, and Joseph Sifakis for their role in developing Model Checking into a highly effective verification technology, widely adopted in the hardware and software industries.

In 1981, Clarke and Emerson, working in the USA, and Sifakis, working independently in France, published seminal papers that established the field of Model Checking, which provides an algorithmic means of determining whether an abstract mode – representing, for example, a hardware or software design – satisfies a formal specification written as a temporal logic formula. Their work over the years has led to the creation of new logics for specification, new verification algorithms, and surprising theoretical results. Model Checking tools enabled a novel approach to verification and test case generation.

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 German Enigma codes. After the war, he worked on early British computers at the National Physical Laboratory and Manchester University. He later studied problems key to artificial intelligence. In his 1950 paper, *Computing machinery and intelligence*, he proposed the "Turing Test," which is still applied in attempting to determine whether a computer is intelligent.

Accompanied by a prize of \$250,000, 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 Turing Award is provided by the Intel Corporation and Google Inc.

ACM – Infosys Foundation Award in the Computing Sciences



Daphne Koller
Stanford University



The ACM – Infosys Foundation Award is presented to Daphne Koller for her work on combining relational logic and probability that allows probabilistic reasoning to be applied to a wide range of applications, including robotics, economics, and biology.

Professor Koller's work on combining relational logic and probability is the most important of her many research contributions in Artificial Intelligence and Computer Science. It has transformed the way people handle uncertainty in large computer systems, such as heterogeneous databases, image understanding systems, biological and medical models, and natural language processing systems.

The ACM – Infosys Foundation Award in the Computing Sciences recognizes personal contributions by young scientists and system developers to a contemporary innovation that, through its depth, fundamental impact and broad implications, exemplifies the greatest achievements in the discipline.

The award carries a prize of \$150,000. Financial support for the award is provided by an endowment from the Infosys Foundation.

ACM – AAAI Allen Newell Award



Leonidas J. Guibas
Stanford University



The ACM – AAAI Allen Newell Award is presented to Leonidas Guibas for pioneering work in computational geometry, with profound applications across an astonishingly broad range of Computer Science disciplines.

Dr. Guibas is a towering figure in theoretical computer science and a pioneer of computational geometry. His groundbreaking, fundamental research over the last quarter century has shaped the field of computational geometry since its infancy and helped it evolve and mature.

The award is named for Allen Newell (1927-1992), a recognized trailblazer in computer science research and education, and a founder of the fields of artificial intelligence and cognitive science. He played a pivotal role in creating Carnegie Mellon's School of Computer Science. He co-authored *Human Problem Solving* with Nobel Laureate Herbert Simon in 1972. Newell and Simon were recipients of ACM's 1975 A.M. Turing Award.

The ACM – AAAI Allen Newell Award is presented to an individual selected for career contributions that have breadth within computer science, or that bridge computer science and other disciplines.

The award is accompanied by a prize of \$10,000, which is provided by ACM and the Association for the Advancement of Artificial Intelligence (AAAI), and by individual contributions.

Software System Award



David Harel

The Weizmann Institute of Science



Hagi Lachover



Amnon Naamad

EMC Corporation



Amir Pnueli

NYU Courant Institute of Science



Michal Politi

Tadiran Electronic Systems



Rivi Sherman

Negevtech



Mark Trakhtenbrot

Holon Institute of Technology/
The Open University of Israel



Aron Trauring

Zoteca



The Software System Award is presented for Statemate, the first embodiment in a commercial computer-aided software engineering tool of a rigorous approach to model-driven development through hierarchical concurrent state machines, executable visual formalisms, and code-generation techniques.

Statemate was designed and built between 1984 and 1986 by a team composed of David Harel, Hagi Lachover, Amnon Naamad, Amir Pnueli, Michal Politi, Rivi Sherman, Mark Trakhtenbrot, and Aron Trauring at Ad Cad, Ltd., which later became the R&D division of I-Logix, Inc. It has been available continuously since then in several increasingly sophisticated versions.

The Software System Award is presented to an institution or individual(s) recognized for developing a software system that has had a lasting influence, reflected in contributions to concepts, in commercial acceptance, or both.

The award is accompanied by a prize of \$35,000. Financial support for the Software System Award is provided by IBM.

Grace Murray Hopper Award



Vern Paxson

University of California at Berkeley,
International Computer Science Institute (ICSI),
Center for Internet Research,
Lawrence Berkeley National Laboratory



The Grace Murray Hopper Award is presented to Vern Paxson for his work in measuring and characterizing the Internet.

Dr. Paxson's PhD dissertation in the mid-1990s laid the groundwork for the exciting resurgence in research in Internet measurement during the last ten years. Through a series of highly influential papers, Dr. Paxson not only provided a wealth of useful information about the nature of the deployed Internet, but also raised the practice of network measurement to an entirely new level.

The award is named for Grace Murray Hopper (1906-1992), a pioneer in the field of software development. Her work spanned programming languages, software development concepts, compiler validation, and data processing. Admiral Hopper's early recognition of the potential for commercial applications of computers, and her leadership and perseverance in making this vision a reality paved the way for modern data processing.

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.

The award is accompanied by a prize of \$35,000. Financial support for the Grace Murray Hopper Award is provided by Google Inc.

Paris Kanellakis Theory and Practice Award



Bruno Buchberger

Johannes Kepler University/RISC



The Paris Kanellakis Theory and Practice Award is presented to Bruno Buchberger for his role in developing the theory of Groebner Bases into a highly effective tool in computer algebra, widely used in symbolic computation systems.

In his 1965 Ph.D. thesis, Dr. Buchberger created the theory of Groebner bases, and has made substantial contributions to the development of this theory throughout his career. He named these bases after his advisor Wolfgang Groebner, and provided a constructive algorithm for these objects, now popularly known as Buchberger's Algorithm.

The award is named for Paris Christos Kanellakis (1953-1995), who, as a distinguished computer science theoretician and esteemed member of the Brown University faculty, focused much of his work in the area of theoretical computer science, particularly the principles of database systems and logic. His contributions were exceptional both in the breadth of his interests and in his ability to carve out research programs in which his keen mathematical insight could be put at the service of practical issues.

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.

Karl V. Karlstrom Outstanding Educator Award



Randy Pausch
Carnegie Mellon University



The Karl V. Karlstrom Outstanding Educator Award is presented to Randy Pausch for his outstanding creative contributions to the art of teaching and mentoring and for the innovative Alice programming environment with which novices can create interactive 3D experiences.

Dr. Randy Pausch is probably best known for being the driving force behind the innovative virtual worlds programming environment Alice and its pedagogy of "playful learning." Alice lets students develop characters and their behaviors in 3D virtual worlds.

The award is named after a pioneer in the field of computer science publications. Karl V. Karlstrom (1921-1988) was the senior editor in computer science for the Prentice-Hall College Technical and Reference Division, responsible for acquiring over 500 computer-related titles for the book publisher, many of which are recognized in the field as landmark editions.

The Karlstrom Award is presented annually to an outstanding educator who: is appointed to a recognized educational baccalaureate institution; is recognized for advancing new teaching methodologies, or effecting new curriculum development or expansion in computer science and engineering; or who is making a significant contribution to the educational mission of the ACM. Those who have been teaching for ten years or less are given special consideration.

The award is accompanied by a prize of \$5,000. Financial support for the Karl V. Karlstrom Outstanding Educator Award is provided by the Prentice-Hall Publishing Company.

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



Randolph Y. Wang
Microsoft Research, India



The Eugene L. Lawler Award for Humanitarian Contributions within Computer Science and Informatics is presented to Randolph Wang for founding and leading the Digital Study Hall Project, a computer systems technology based approach to creating, distributing, and collectively improving the digital teaching materials used by teachers serving rural poor children in the third world.

The award is named for Eugene L. Lawler (1933-1994), one of the founders of combinatorial optimization, who also made significant contributions to algorithmic graph theory, complexity theory, and computational biology. In addition, he encouraged efforts at the University of California at Berkeley to establish the Reentry Program for Women and Minorities, and was the first faculty advisor and effective advocate of this program.

The Lawler Award recognizes an individual or a group who have made a significant humanitarian contribution through the use of computing technology. This biennial endowed award is accompanied by a prize of \$5,000.



David A. Patterson

University of California
at Berkeley

Distinguished Service Award



The Distinguished Service Award is presented to David A. Patterson for distinguished service to ACM and the computing community, especially in the areas of education, national committees, and professional societies. Dr. Patterson's sustained service, in a number of forms, has benefited the entire computing community. His creativity, ability to execute, and sheer energy have made computing better respected and better understood in many venues, national and international. His excellence in teaching has served several generations of computer scientists at the University of California directly, and his computer architecture textbooks have served a broader audience.

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 the Association, and should include activities in other computer organizations and should emphasize contributions to the computing community at large.

ACM – IEEE CS Eckert-Mauchly Award



David A. Patterson is the recipient of the 2008 ACM – IEEE CS Eckert-Mauchly Award, presented at ISCA 2008, the ACM SIGARCH – IEEE TCCA 35th Annual International Symposium on Computer Architecture, in Beijing, China. The award recognizes Dr. Patterson for seminal contributions to RISC microprocessor architectures, RAID storage systems design, and reliable computing, and for leadership in education and in disseminating academic research results into successful industrial products.

Administered jointly by ACM and IEEE CS, the award is given for contributions to computer and digital systems architecture, where the field of computer architecture is considered at present to encompass the combined hardware-software design and analysis of computing and digital systems. The award is accompanied by a prize of \$5,000.



Shafi Goldwasser

MIT/Weizmann Institute
of Science

ACM-W Athena Lecturer Award



The 2008 Athena Lecturer Award is presented to Shafi Goldwasser of MIT/Weizmann Institute of Science. The Athena Lecturer Award celebrates women researchers who have made fundamental contributions to Computer Science. ACM's Committee on Women in Computing (ACM-W), organizers of the Athena Lecturer project, honor a preeminent woman computer scientist each year. ACM-W chose to identify the honoree with the Greek goddess of wisdom, who, with her wisdom and sense of purpose and willingness to enter the fray, epitomizes the strength, determination, and intelligence of the Athena Lecturers. The Athena Lecture is scheduled to take place at the ACM Symposium on the Theory of Computing sponsored by SIGACT in May, 2009. The award includes a \$10,000 Honorarium, provided by Google Inc.

Outstanding Contribution to ACM Award



Robert A. Walker
Kent State University

The Outstanding Contribution to ACM Award is presented to Robert A. Walker for a sustained record of dedicated and conscientious leadership within the ACM Special Interest Groups, including service as Chair of the SIG Governing Board, Chair of SIGDA, SGB Representative to Council, as well as leadership in ACM conference organization.

Dr. Robert A. (Bob) Walker epitomizes the volunteer spirit within ACM. For more than 15 years he has lent his expertise, enthusiasm, and hard work to advancing the organization and the profession, doing so with extraordinary collegiality and charm.

Dr. Walker began his service as a volunteer with ACM's Special Interest Group on Design Automation (SIGDA) in 1992. He subsequently became a SIGDA Advisory Board member, Secretary/Treasurer, Newsletter Editor, and finally SIGDA Chair (2001-2005). Today, Dr. Walker continues his service as an SGB Representative to the ACM Council. There, Dr. Walker has provided leadership in organizing ACM's new advanced member grade program, serving as Chair of the Senior Member Committee.

The award is given to individuals who are selected on the value and degree of service to ACM.

The SIAM/ACM Award in Computational Science and Engineering

This biennial endowed award recognizes an individual(s) for outstanding research contributions to the field of computational science and engineering. The contribution(s) must be publicly available and may belong to any aspect of computational science in its broadest sense. The award includes a prize of \$5,000. Financial support for this award is provided by SIAM.

ACM Gordon Bell Prize

The winners of the 2007 ACM Gordon Bell Prizes are James N. Glosli, Kyle J. Caspersen, David F. Richards, Robert E. Rudd, and Frederick H. Streitz of the Lawrence Livermore National Laboratory, and John A. Gunnels, IBM Corporation, for *Extending Stability Beyond CPU Millennium: A Micron-Scale Atomistic Simulation of Kelvin-Helmholtz Instability*.

The Gordon Bell Prizes are awarded each year to recognize outstanding achievement in high-performance computing. The purpose of the awards is to track the progress over time of parallel computing, with particular emphasis on rewarding innovation in applying high-performance computing to applications in science. Prizes are awarded for peak performance, special achievements in scalability, and time-to-solution on important science and engineering problems and low price/performance.

The awards are presented during the Super Computing Conference and include a total of \$10,000 in prize money. The awards have been endowed by Gordon Bell, a pioneer in high-performance and parallel computing.

ACM Presidential Award



The ACM Presidential Awards are given to leaders whose actions and achievements serve as paragons for our field. Recipients have demonstrated their exceptional abilities to advance computing and enhance its impact for the benefit of society through generosity, creativity and dedication to their respective missions.



Stephen R. Bourne

El Dorado Ventures



The ACM Presidential Award is presented to Stephen R. Bourne for his tireless efforts on behalf of ACM, most notably his visionary and continuing leadership in the creation of *Queue* and the ACM Professions Board, as well as his expert guidance as Chair of ACM's Investment Committee and his support for the International Collegiate Programming Contest.

Dr. Bourne's work fosters goodwill for the computing profession and draws the best of the next generation to ACM.



Patricia M. Ryan

Association for Computing Machinery



In honor of her outstanding and fundamental contributions to ACM, serving as the conduit to which all volunteers turn for her encyclopedic knowledge of the Association and her steadfast resolve to respond to their needs. ACM has profoundly benefited over the years from Pat Ryan's careful management of human and financial resources. Her boundless dedication to ACM is without equal.

ACM Presidential Award



Barbara Ryder

Virginia Polytechnic Institute
and State University



The ACM Presidential Award is presented to Barbara Ryder for her devoted efforts as Chair of the 2003 Federated Computing Research Conference, and Steering Committee Chair of the 2007 FCRC, as well as for her exceptional work on behalf of SIGPLAN's History of Programming Languages conferences, including serving as Program Chair of 2007's HOPL-III. Dr. Ryder served as a Member-at-Large of the ACM Council from 2000 – 2008, and also on SIGPLAN's Executive Committee from 1989 to 1999 and as Chair from 1995 – 1997.

She has been a source of inspiration to women in the computing field, dedicating her services in their support, including, serving on the Athena Lecturer Award Committee. Her contributions as Member-at-Large on ACM's Council have provided valuable insights.



Moshe Vardi

Rice University



The ACM Presidential Award is presented to Moshe Vardi for his unwavering commitment in driving the ACM Job Migration Task Force and its Globalization and Offshoring of Software report, drawing worldwide attention to its wealth of information and balanced perspective.

Dr. Vardi's ambitious efforts on behalf of ACM continue as he energetically leads the revitalization of ACM's flagship publication, *Communications of the ACM*, having become its Editor-in-Chief.

ACM International Collegiate Programming Contest



The 2008 ACM International Collegiate Programming Contest (ICPC) competition, which is sponsored by IBM, drew from a record 6,700 teams from 1,821 universities in 83 countries who competed in regional contests worldwide for a spot at the 32nd World Finals. The World Finals took place April 9, 2008, at the University of Alberta in Banff Springs, Alberta, Canada.

The members of the 2008 winning team are: Dmitry Abdrashitov, Dmitry Paraschenko and Fedor Tsarev from St. Petersburg University of IT, Mechanics and Optics. The Coach of the winning team is Andrey Stankevich and the team advisor is Vladimir Parfenov.

ACM Student Research Competition



The ACM Student Research Competition (SRC) represents a unique forum for ACM undergraduate and graduate student members to present their original research. Student winners from the OOPSLA, SIGGRAPH, and SIGCSE SRCs advanced to compete in the Grand Finals where their research contributions were evaluated, via the web, by the ACM SRC committee members. Financial sponsorship for the ACM Student Research Competition is provided by Microsoft Research. The finalists represent the best student research of the past year. The winners of the ACM Grand Finals are listed below in alphabetical order:

Graduate Category

Himabindu Pucha, Purdue University
Lakshminarayanan Renganarayanan,
Colorado State University
Junqing Sun,
University of Tennessee, Knoxville

Undergraduate Category

Jerry Backer, The City College of the City
University of New York
Neha Singh, IIT Bombay
Matei Zaharia, University of Waterloo

Intel International Science and Engineering Fair



The Intel International Science and Engineering Fair (ISEF) is held annually each May, and has been administered since 1950 by the Society for Science & the Public (formerly Science Service). Over 1,500 ninth through twelfth grade student winners from over 40 nations are among those who have earned the right to compete by winning top prize at a local, regional, state or national science fair. Special Awards are presented by scientific, professional and educational organizations and include scholarships, summer internships, book and equipment grants and scientific field trips. ACM presents awards of \$1,000 for first place, \$500 for second place, \$300 for third place and \$200 for honorable mention winners, and all receive complimentary Student Memberships for the duration of their undergraduate education. The 59th Intel ISEF was held May 11-17, 2008 in Atlanta, GA. ACM winners for 2008 were:

First Place:

David C. Williams-King

Second Place:

Dongyoung Kim

Third Place:

Martin C. Maas

The Honorable Mention Winners

Lucia Moc
Ken Miura
Mami Inoue
Mayu Suzuki
Maxim G. Gridnev
Andrey A. Churinov
Leonid A. Mashinskiy

ACM Fellows



The Fellows Program was established by the ACM 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 2007 Fellows are listed below, and a complete listing of the ACM Fellows can be found on pages 25–29 in this booklet, and on the ACM website: <http://fellows.acm.org/>

- Anant Agarwal*, Massachusetts Institute of Technology
Rajeev Alur, University of Pennsylvania
Utpal Banerjee, Intel Corporation
Catriel Beeri, Hebrew University
Avrim Blum, Carnegie Mellon University
Eric A. Brewer, University of California, Berkeley
Andrei Z. Broder, Yahoo! Research
Michael F. Cohen, Microsoft Research
Larry L. Constantine, University of Madeira, Constantine & Lockwood, Ltd.
Danny Dolev, Hebrew University
Rodney Graham Downey, Victoria University of Wellington, New Zealand
Edward Feigenbaum, Stanford University
Edward W. Felten, Princeton University
Lance J. Fortnow, Northwestern University
Guang R. Gao, University of Delaware
Georg Gottlob, Oxford University
Richard Hull, Bell Labs Research, Alcatel-Lucent
Daniel P. Huttenlocher, Cornell University
Tao Jiang, University of California, Riverside
John C. Klensin, Consultant
Monica S. Lam, Stanford University
Marc Levoy, Stanford University
Bhubaneswar (Bud) Mishra, NYU, Courant Institute of Mathematical Sciences
J. Eliot B. Moss, University of Massachusetts, Amherst
Rajeev Motwani, Stanford University
Martin Odersky, École Polytechnique Fédérale du Lausanne
Gary M. Olson, University of Michigan, Ann Arbor
David Padua, University of Illinois, Urbana-Champaign
Randy Pausch, Carnegie Mellon University
Amir Pnueli, NYU, Courant Institute of Mathematical Sciences
Viktor K. Prasanna, University of Southern California
Aristides A. G. Requicha, University of Southern California
Eric S. Roberts, Stanford University
Demetri Terzopoulos, University of California, Los Angeles
Donald E. Thomas, Carnegie Mellon University
Philip Wadler, University of Edinburgh
Mitchell Wand, Northeastern University
HongJiang Zhang, Microsoft Advanced Technology Center, Beijing

ACM Award Nomination Submission Procedures



Nominations for ACM awards should be submitted by **September 30, 2008** for the Doctoral Dissertation Award, and by **November 30, 2008** for all other ACM awards, to the respective subcommittee chair listed on pages 20 & 21, or to the Office of Policy and Administration, ACM, 2 Penn Plaza, Suite 701, New York, NY 10121-0701, USA.

For ACM Fellow, the deadline is **September 9, 2008**. For ACM Distinguished Member it is **July 31, 2008**. For Senior Member it is **August 31, 2008**.

As a general rule, each nomination submitted should consist of at least the following items:

1. Name, address, phone number and email address of the person making the nomination.
2. Name, address, and email address of the candidate for whom an award is recommended.
3. A statement (between 200 and 500 words long) as to why the candidate deserves the particular award. For the Karl V. Karlstrom Outstanding Educator Award, a CV and listing of the candidate's Ph.D. students and their current positions are requested. It would be helpful to include the candidate's CV for all other award nominations.
4. Supporting letters from a minimum of two endorsers.
5. For the A.M. Turing Award, a minimum of 3 endorsements should be provided. A.M. Turing Award nominations usually include substantive letters of support from a group of prominent individuals broadly representative of the candidate's field.



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

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Robert A. Walker, SGB Awards Committee Liaison
See contact information on page 21

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/awardsbrochure

SIGACCESS - Special Interest Group on Accessibility and Computers

- ◆ Best Paper Award
- ◆ Best Student Paper Award

SIGACT - Special Interest Group on Algorithms and Computation Theory

- ◆ Gödel Prize
- ◆ Knuth Prize for Outstanding Contributions to the Foundations of Computer Science
- ◆ Service Prize
- ◆ Danny Lewin Best Student Paper Award
- ◆ SIGACT/SIGOPS Edsger W. Dijkstra Prize in Distributed Computing

SIGAda - Special Interest Group on Ada Programming Language

- ◆ Outstanding Ada Community Contributions
- ◆ Distinguished Service Award

SIGAPL - Special Interest Group on APL Programming Language

- ◆ Kenneth E. Iverson Award

SIGAPP - Special Interest Group on Applied Computing

- ◆ Distinguished Service Award
- ◆ Outstanding Service Award

SIGARCH - Special Interest Group on Computer Architecture

- ◆ Maurice Wilkes Award
- ◆ ISCA Influential Paper Award

SIGART - Special Interest Group on Artificial Intelligence

- ◆ Annual Award for Excellence in Autonomous Agent Research

SIGBED - Special Interest Group on Embedded Systems

- ◆ SIGBED and SIGSOFT Frank Anger Memorial Award

SIGCAS - Special Interest Group on Computers and Society

- ◆ Outstanding Service Award
- ◆ Making a Difference Award

SIGCHI - Special Interest Group on Computer-Human Interaction

- ◆ SIGCHI Academy
- ◆ Lifetime Achievement Award
- ◆ Lifetime Service Award

SIGCOMM - Special Interest Group on Data Communication

- ◆ Award for Lifetime Achievement

SIGCSE - Special Interest Group on Computer Science Education

- ◆ Award for Outstanding Contributions to Computer Science Education
- ◆ Lifetime Service

SIGDA - Special Interest Group on Design Automation

- ◆ Outstanding Ph.D. Dissertation Award in Electronic Design Automation
- ◆ SIGDA IEEE/ACM William J. McCalla ICCAD Best Paper Award
- ◆ SIGDA - IEEE Council on Electronic Design Automation: A. Richard Newton Technical Impact Award in Electronic Design Automation
- ◆ IEEE Council on Electronic Design

SIGDOC - Special Interest Group on Design of Communication

- ◆ Joseph T. Rigo Award
- ◆ Diana Award

ACM's Special Interest Group Awards



SIGGRAPH - Special Interest Group on Computer Graphics

- ♦ Steven A. Coons Award
- ♦ Computer Graphics Achievement Award
- ♦ Outstanding Service Award
- ♦ Significant New Researcher Award

SIGIR - Special Interest Group on Information Retrieval

- ♦ Gerard Salton Award
- ♦ Best Paper Award
- ♦ Best Student Paper Award
- ♦ SIGWEB/SIGIR Vannevar Bush Award

SIGKDD - Special Interest Group on Knowledge Discovery in Data

- ♦ Innovation Award
- ♦ Service Award

SIGMETRICS - Special Interest Group on Measurement and Evaluation

- ♦ Achievement Award
- ♦ Kenneth C. Sevcik Outstanding Student Paper Award

SIGMIS - Special Interest Group on Management Information Systems

- ♦ Magid Igbaria Outstanding Conference Paper of the Year Award

SIGMOBILE - Special Interest Group on Mobility of Systems, Users, Data & Computing

- ♦ Distinguished Service Award
- ♦ Outstanding Contributions Award

SIGMOD - Special Interest Group on Management of Data

- ♦ Contribution Award
- ♦ Edgar F. Codd Innovations Award
- ♦ Test of Time Award
- ♦ Jim Gray Doctoral Dissertation Award

SIGOPS - Special Interest Group on Operating Systems

- ♦ Mark Weiser Award
- ♦ Hall of Fame Award
- ♦ SIGACT/SIGOPS Edsger W. Dijkstra Prize in Distributed Computing

SIGPLAN - Special Interest Group on Programming Languages

- ♦ Distinguished Service Award
- ♦ Programming Languages Achievement Award
- ♦ Most Influential PLDI Paper Award
- ♦ Most Influential POPL Paper Award
- ♦ Most Influential OOPSLA Paper Award
- ♦ Doctoral Dissertation Award

SIGSAC - Special Interest Group on Security, Audit and Control

- ♦ Outstanding Innovation Award
- ♦ Outstanding Contribution Award

SIGSAM - Special Interest Group on Symbolic and Algebraic Manipulation

- ♦ Richard Jenks Memorial Prize

SIGSOFT - Special Interest Group on Software Engineering

- ♦ Distinguished Service Award
- ♦ Outstanding Research Award
- ♦ SIGBED/SIGSOFT Frank Anger Award
- ♦ SIGSOFT/IEEE TCSE ICSE Most Influential Paper Award

SIGUCCS - Special Interest Group on University and College Computing Services

- ♦ Penny Crane Award

SIGWEB - Special Interest Group on Hypertext, Hypermedia and the Web

- ♦ Douglas Engelbart Best Paper Award
- ♦ SIGWEB/SIGIR Vannevar Bush Award
- ♦ Nelson Award

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Software System

Carlo Ghezzi, Politecnico di Milano

Grace Murray Hopper

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Doctoral Dissertation

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Andries van Dam, Brown University

ACM - AAAI Allen Newell

Hal Abelson, Massachusetts Institute of Technology

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

Nina Bhatti, Hewlett Packard Laboratories

Paris Kanellakis Theory and Practice

Edmund Clarke, Carnegie Mellon University

International Science and Engineering Fair (ISEF)

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SIAM/ACM Prize in Computational Science and Engineering

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Fair**

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Yossi Matias

**SIAM/ACM Prize in
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David E. Keyes

Mateo Valero

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. Anthony R. Hoare
- 1981 Edgar F. Codd
- 1982 Stephen A. Cook
- 1983 Ken Thompson
- 1983 Dennis M. Ritchie
- 1984 Nicklaus 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 Adi Shamir
- 2003 Alan Kay
- 2004 Vinton G. Cerf
- 2004 Robert E. Kahn
- 2005 Peter Naur
- 2006 Frances E. Allen

Software System Award

- 1983 **UNIX**
Ken Thompson
Dennis M. Ritchie
- 1984 **Xerox Alto Systems**
Butler W. Lampson
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 **System R**
Donald Chamberlin
James Gray
Raymond Lorie
Gianfranco Putzolu
Patricia Selinger
Irving Traiger
- 1988 **INGRES**
Gerald Held
Michael Stonebraker
Eugene Wong
- 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

World-Wide Web

- Tim Berners-Lee
Robert Cailliau
- 1995 **NCSA Mosaic**
Marc Andreessen
Eric Bina
- 1996 no award given
- 1997 **Tcl/tk**
John Ousterhout
- 1998 **S System**
John M. Chambers
- 1999 **The Apache Group**
Brian Behlendorf
Roy T. Fielding
Rob Hartill
David Robinson
Cliff Skolnick
Randy Terbush
Robert S. Thau
Andrew Wilson
- 2000 no award given
- 2001 **SPIN Verification System**
Gerard 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**
Robert S. Boyer
Matt Kaufmann
J Strother Moore
- 2006 **Eiffel**
Bertrand Meyer

*Programming Systems and Languages Paper Award**

- 1971 Peter Lucas
Kurt Walk
- 1971 Peter J. Denning
- 1971 Edsger W. Dijkstra
- 1971 Jan Gecsei
Richard L. Mattson
Donald R. Slutz
Irving Traiger
- 1971 John C. Reynolds
- 1972 no award given
- 1973 C.A.R. Hoare

Past Recipients



1974 Zohar Manna
Stephen Ness
Jean Vuillemin
1975 Daniel G. Bobrow
Ben Wegbreit
1975 Dennis Ritchie
Kenneth Thompson
1976 John Cocke
Frances E. Allen
1977 David Gries
Susan Owicki
1978 Niklaus Wirth
1979 David L. Parnas
1980 no award given
1981 no award given
1982 James Gray
Paul McJones
Michael Blasgen
Bruce Lindsay
Raymond Lorie
Thomas Price
Gianfranco Putzolu
Irving Traiger

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

Grace Murray Hopper Award

1971 Donald E. Knuth
1972 Paul E. Dirksen
1972 Paul H. Cress
1973 Lawrence Breed
1973 Richard Lathwell
1973 Roger Moore
1974 George N. Baird
1975 Allen L. Scherr
1976 Edward H. Shortliffe
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 Shafira Goldwasser
1997 no award given
1998 no award given
1999 Wen-mei Hwu
2000 Lydia Kavradi
2001 George Necula
2002 Ramakrishnan Srikant
2003 Stephen W. Keckler
2004 Jennifer Rexford
2005 Omer Reingold
2006 Daniel Klein

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 Bajcsy
2002 Peter Chen
2003 David Haussler
2003 Judea Pearl
2004 Richard P. Gabriel
2005 Jack Minker
2006 Karen Spärck Jones

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 E. 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 Solovay
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

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

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

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

Distinguished Service Award

1970 Franz L. Alt
1971 J. Don Madden
1972 George E. Forsythe
(posthumously)
1973 William Atchison
1974 Saul Gorn
1975 John W. Carr III
1976 Richard G. Canning
1977 Thomas B. Steel, Jr.
1978 Eric A. Weiss

Past Recipients



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

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

Outstanding Contribution to ACM Award

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
 1985 Thomas A. D'Auria
 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. Ashenurst
 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

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) Ra
 2003 Joseph A. (Josh) Fisher
 2004 Frederick P. Brooks, Jr.
 2005 Robert P. Colwell
 2006 James Pomerene
 2007 Mateo Valero

SIAM-ACM Award in Computational Science and Engineering

2003 John B. Bell
 2003 Phillip Colella
 2004 Achi Brandt
 2007 Chi-Wang Shu

ACM Presidential Award

1985 Robert E. Kahn
 1987 Kent Curtis
 1998 John Gage
 2002 Calvin C. Gotlieb
 2006 Andreas Bechtolsheim
 2006 Janice E. Cuny
 2006 Edward Lazowska
 2007 Eugene Spafford

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Abraham Kandel
Sung Mo Kang
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Sidney Karin
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Dexter Kozen
Jeffrey Kramer
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Vipin Kumar
James Kurose
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Ray Kurzweil

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 S. Lakshmivarahan
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 Paul R. McJones
 Kathleen McKeown
 Nick McKeown

Kurt Mehlhorn
 Daniel Menacsé
 Albert R. Meyer
 Barton Miller
 Gary Miller
 Raymond Miller
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 A.J.R.G. Milner
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 Bhubaneswar Mishra*
 Jayadev Misra
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