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# ACM's FY14 Annual Report

As I write this letter, ACM has just issued a landmark announcement revealing the monetary level for the ACM A.M. Turing Award will be raised this year to \$1 million,

with all funding provided by Google Inc. The news made the global rounds in record time, bringing worldwide visibility to the award and the Association. Long recognized as the equivalent to the Nobel Prize for computer science, ACM's Turing Award now carries the financial clout to stand on the same playing field with the most esteemed scientific and cultural prizes honoring game changers whose contributions have transformed the world.

This really is an extraordinary time to be part of the world's largest educational and scientific society in computing. Membership is at a record high for the 12<sup>th</sup> consecutive year, ACM continues to expand its global reach thanks to our thriving hubs in Europe, India, and China, and ACM's position at the forefront of computer science education has never been more prominent than it is today.

This year marked the stellar debut of the Heidelberg Laureate Forum, which brought together 200 students with 40 international recipients of the most prestigious awards in com-

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puter science and mathematics. I was honored to be a participant in this inaugural event; I found it an inspirational gathering of innovators and understudies who will be the next award recipients.

This year also marked the publication of highly anticipated ACM-IEEE-CS collaboration *Computer Science Curricula 2013* and the acclaimed *Rebooting the Pathway to Success: Preparing Students for Computer Workforce Needs in the United States*, an exhaustive report from ACM's Education Policy Committee that focused on IT workforce needs at the U.S. state and national levels as well as the educational pathways to meet those needs.

As you read the following pages you will discover a year filled with ambitious initiatives and new services designed to increase the professional value of your ACM membership, wherever you may be in the world. Yet with all these achievements, ACM remains a work in progress and there is still much work to do. Issues of open access and digital library sustainability remain high priorities for ACM's leadership. Extending ACM's global influence and visibility even further will *always* be of utmost importance.

The coming year will see new opportunities and new challenges and ACM is ready to take on both with great determination. As always, we will look to our dedicated volunteers, members, and industry partnerships to help guide us. ACM's future is a journey we take together, and has been my great pleasure to serve as your president for this part of the trip.

*Vinton G. Cerf*, ACM PRESIDENT  
JULY 2012–JUNE 2014

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# Highlights of ACM Activities: July 1, 2013–June 30, 2014

*ACM, the Association for Computing Machinery, is an international scientific and educational organization dedicated to advancing the arts, sciences, and applications of information technology.*

## Publications

The cornerstone of ACM publications is the ACM Digital Library (DL) serving as the primary distribution mechanism for all the Association's publications as well as host to scientific periodicals and a set of conference proceedings from external organizations. The DL, now available at 2,650 institutions in 190 countries, boasts an estimated five million users worldwide. An additional 31,000 individual subscribers in 196 countries have DL access. The result of this widespread availability led to more than 20 million full-text downloads in FY14.

ACM is committed to increasing the scope of material available via the DL. Last year, over 23,000 full-text articles were added, bringing total DL holdings to 425,000 articles. ACM's *Guide to Computing Literature* is also integrated within the DL. More than 105,000 works were added to the bibliographic database in FY14, bringing the total *Guide* coverage to more than 2.3 million works.

ACM is the publisher of 79 periodicals, including 44 journals and transactions, 8 magazines, and 32 newsletters as of year-end FY14. During the year, ACM added 450 volumes of conference and related workshop proceedings to its portfolio. The ACM International Conference Proceedings Series (ICPS) added 94 new volumes, a significant increase over FY13.

The ACM Publications Board continues to examine ways to offer authors and readers greater open access to our published material. In the past year, in addition to continuing current policies and experiments offering authors a choice of copyright options and a suite of author-retained rights, the Publications Board approved in concept the

creation of an umbrella Gold-OA ACM journal. Moreover, the board helped to found the Clearinghouse for the Open Research of the U.S. (CHORUS), a publishing industry effort to facilitate compliance with U.S. open access mandates.

ACM Press Book Series, in partnership with Morgan & Claypool publishers, finished its first full year of operation. Three titles were introduced in FY14, all available in the DL.

The Coalition to Diversify Computing presented its inaugural edition of *Celebration of Latinas in Computing* at the Grace Hopper Celebration in early FY14. This publication followed the CDC's *Celebration of Black Women in Computing*, which is now in its second edition.

The Computer Science Teachers Association (CSTA) worked with Microsoft to develop a set of curricular resources. *CS Principles: Computation in Action Curriculum* was designed to engage a variety of students in socially relevant, project-based learning.

SIGLOG debuted its first newsletter in FY14 and SIGMOBILE introduced an epub format for making content more easily accessible using popular mobile devices. Indeed, MobiSys 2014 provided epub files for all accepted papers and made them freely accessible to all conference attendees.

**ACM's partnering with Code.org represents a significant investment in seeing real computer science exist and count in U.S. high schools.**

## Education

ACM continues to lead the computer science education community through the work of the ACM Education Board, the ACM Education Council, ACM SIGCSE, Computer Science Teachers Association (CSTA), and ACM Education Policy Committee.

The CS2013 Final Report, a comprehensive joint activity of ACM and IEEE-CS, was published at year-end 2013 to great acclaim. The report contains guidance for undergraduate CS programs, including a revised Body of Knowledge and over 80 course exemplars.

The first Heidelberg Laureate Forum brought together 200 young researchers, 22 Turing laureates, and 11 Fields/Abel laureates. The weeklong event offered students a unique opportunity to share ideas with legends in the fields of computer science and mathematics.

ACM's Education Board was charged with overseeing the launch of the inaugural Learning@Scale conference in Atlanta last March. The extremely successful event marked the first time a conference was spawned by a Board within ACM.

The ACM Education Policy Committee (EPC) released its much-anticipated report: *Rebooting the Pathway to Success: Preparing Students for Computer Workforce Needs in the United States*. This latest report calls on education and business leaders and public policy officials nationwide to take immediate action aimed at filling the pipeline of qualified students pursuing computer science and other computer-related degrees, and to prepare them for the 21<sup>st</sup> century workforce.

ACM's partnering with Code.org represents a significant investment in seeing real computer science exist and count in U.S. high schools. It is an investment that has paid off substantially. At the end of FY14, 22 states had moved to enact legislation to make computer science count as a core

graduation credit in science and math. Moreover, over 17 million students, parents, and teachers participated in the Hour of Code during Computer Science Education Week.

ACM, through the EPC, participated in the Leadership Council of the STEM Education Coalition. White House briefs on STEM policy allowed education stakeholders to learn about the Administration's proposed STEM reorganization plans and to discuss such issues with policymakers.

The CSTA continues to thrive as a key component in ACM's efforts to support computer science at the high school level. CSTA membership reached almost 17,000, an increase of 21% over FY13. Indeed, there are now 55 CSTA chapters in 25 U.S. and four Canadian provinces.

ACM Europe and Informatics Europe continued the work they began last year with their report "Informatics Education—Europe Cannot Afford to Miss the Boat," which highlights the need for increased investment in CS education for Europe to remain competitive in a global technology area. The group, newly named Committee on European Education, plans to supplement this report by mapping out informatics education both for curricula and for teaching methodologies across Europe.

ACM India established an Education Board with the goal of increasing knowledge and interest in computing throughout the nation's school system, improve teaching methods and content in engineering colleges, and encourage the use of online material for learning about computing.

### Professional Development

The Practitioners Board and Professional Development Committee (PDC) directed many new products and initiatives designed for computing professionals and managers.

In FY14, ACM PDC continued the successful webinar series with consistent monthly webcasts, tighter integration with SIGs, and a more diverse set of topics. The committee added 13 webinars in FY14. Among the featured topics: IPv6 security, Intro to WebGL, Ruby for the Nuby, Hadoop/Big Data, and MOOCs.

For the fourth consecutive year,

## The ACM-W Scholarship program further enhanced its support for women undergraduate and graduate students in computer science and related programs.

*ACM Queue*, the online practitioner's magazine spirited by the Practitioner Board, surpassed the million-pageview threshold, with 1,158,741 pages viewed over the last 12 months.

### Public Policy

ACM's U.S. Public Policy Council (US-ACM) made significant progress this year in delivering on its mission to educate and inform policy leaders, ACM members, the computing community, and the public about U.S. policy issues related to IT and computing.

One of USACM's major projects this year was the establishment of the ACM Merit Award in Public Policy to honor efforts by individuals or groups that exhibit excellence in computing policy engagement. The ACM Awards committee approved USACM's proposal for this new policy award last May, with the agreement the award will be given every other year, beginning in 2016.

USACM also participated in several multistakeholder partnerships to help educate and raise awareness of technology issues among legislators and the public at large. Among those joint efforts were: working on the Identity Ecosystem Steering Group, USPTO software partnership, Internet policy task force, and Congressional Internet Caucus Advisory Committee.

ACM Europe established a EUACM body (similar to USACM) to address public policy concerns affecting the European computing community. The first policy position of ACM Europe was issues regarding the Transatlantic Trade Agreement.

The Committee on Computers

and Public Policy assists ACM in a variety of internationally relevant issues pertaining to computers and public policy. CCPP's respected *ACM Forum on Risks to the Public in Computers and Related Systems*, designed to discuss potential and serious computer-related risks with a global audience, covers such issues as human safety, privacy, election integrity, and societal/legal responsibilities. Over this fiscal year, 63 issues of the Risks digest were produced.

### Students

The 38<sup>th</sup> Annual ACM International Collegiate Programming Contest (ACM-ICPC) was hosted by Ural Federal University, Ekaterinburg, Russia, with 122 teams competing in the World Finals. Earlier rounds of the competition included nearly 32,000 contestants representing 2,200 universities from 94 countries. Financial and systems support for ICPC is provided by IBM. The top four teams won Gold medals as well as employment or internship offers from IBM.

The ACM Student Research Competition (SRC), sponsored by Microsoft Research, continues to offer a unique forum for undergraduate and graduate students to present their original research at well-known ACM-sponsored and co-sponsored conferences before a panel of judges and attendees. This year's SRC saw graduate and undergraduate winners compete against more than 215 participants in contests held at 17 ACM conferences.

The ACM-W Scholarship program further enhanced its support for women undergraduate and graduate students in CS and related programs. The committee awarded over 40 student scholarships in FY14 to students to attend research conferences around the world.

### Internationalization

Representatives from government, industry, and academia considered Europe's future global competitiveness in research and innovation at a special open session at the ACM Europe Council meeting last March. The panel explored "The Future of Computer Science Research in Europe," particularly some of the weaknesses in the Horizon 2020 research program, for which the

EU has invested nearly 80 billion euros. The meeting proved a unique opportunity to address the funding, educational, and research issues facing CS research in Europe.

ACM Europe also steered several activities to raise the visibility of ACM's mission and value throughout Europe. The Council of European Chapter Leaders (CECL) was created last year to promote networking between chapter leaders and to help grow more sustainable chapters. ACM Europe has been working tirelessly to increase the number of ACM conferences in Europe. They also further strengthened their collaboration with Informatics Europe to share resources and organizational insights.

ACM-W Europe held its first event at Manchester University last March. womENcourage Celebration of Women in Computing brought students, career researchers and practitioners to present, share, and celebrate their technical accomplishments and experiences working and studying computing.

The ACM China Council was reformulated this year; its new agenda focuses on growing the number of chapters, launching student chapters, starting new China-wide awards, bringing more conferences to China, and engaging in education work, particularly the translation of CS2013 to Chinese. In FY14, the number of chapters in China grew 77%.

ACM India is now in full operation as a separate legal entity. The Research Board of ACM India continues to develop; a highlight of its efforts included a major faculty summit organized by ACM India and MSR India. In FY14, the number of chapters in India grew 16%.

A series was organized by ACM-W India jointly with Madras Management Association. The talks were intended for company executives, professionals, administrators, consultants, and students. Of special interest was the first-of-its-kind CODHER Hackathon to promote participation among women in technical events.

### Electronic Community

ACM's e-Rights transfer application system completed its first full year of operations. This comprehensive system gives authors new options for

## Balance Sheet: June 30, 2014 (in Thousands)

### ASSETS

Cash and cash equivalents	\$37,024
Investments	79,657
Accounts receivable and other current assets	7,593
Deferred conference expenses and other assets	7,661
Fixed assets, net of accumulated depreciation and amortization	1,046
<b>Total Assets</b>	<b>\$132,981</b>

### LIABILITIES AND NET ASSETS

Liabilities:	
Accounts payable, accrued expenses, and other liabilities	\$13,996
Unearned conference, membership, and subscription revenue	24,627
<b>Total liabilities</b>	<b>\$38,623</b>
Net assets:	
Unrestricted	87,851
Temporarily restricted	6,507
<b>Total net assets</b>	<b>94,358</b>
<b>Total liabilities and net assets</b>	<b>\$132,981</b>

Optional Contributions Fund — Program Expense (\$000)	
Education Board accreditation	\$95
USACM Committee	20
<b>Total expenses</b>	<b>\$115</b>

managing rights and permissions. The system, used by all ACM journals, proceedings, and magazines, completely automates the rights transfer process.

Statistics prove that more and more readers are accessing ACM's magazines via mobile devices. *Communications of the ACM*, *ACM Inroads*, *XRDS*, and *Interactions* are accessible as easy-to-use mobile apps for iPhones, iPads, and Android devices. These downloadable apps enable members to access their favorite ACM magazines in a new way.

ACM-W debuted a new website designed to act as an international hub for all of the council's events, announcements, programs, and online services. The site also introduced a digital version of the popular ACM-W Connections newsletter.

ACM SIGs across the board con-

tinue to strengthen their online presence to build global awareness as well as incorporate social media into their operation at every opportunity. SIGHPC hosted two webinars during the year that broke all previous ACM records for participation. The SIG also chartered the first ACM "virtual chapter," which focuses on education.

### Conferences

SIGGRAPH 2013 welcomed 17,162 artists, research scientists, gaming experts and developers, filmmakers, students, and academics from 77 countries to Anaheim, CA. Over 1,350 speakers and contributors participated in the event and SIGGRAPH's exhibition hall drew 180 industry organizations from 15 countries.

Both SIGCOMM and SIGKDD drew record-high attendance to their flag-

## Statement of Activities: Year ended June 30, 2014 (in Thousands)

REVENUE	Unrestricted	Temporarily Restricted	Total
Membership dues	\$8,323		\$8,323
Publications	20,375		20,375
Conferences and other meetings	27,161		27,161
Interests and dividends	1,870		1,870
Net appreciation of investments	6,813		6,813
Contributions and grants	3,994	\$1,556	5,550
Other revenue	253		253
Net assets released from restrictions	1,763	(1,763)	0
<b>Total Revenue</b>	<b>70,552</b>	<b>(207)</b>	<b>70,345</b>
<b>EXPENSES</b>			
Program:			
Membership processing and services	\$812		\$812
Publications	11,207		11,207
Conferences and other meetings	24,606		24,606
Program support and other	9,446		9,446
<b>Total</b>	<b>46,071</b>		<b>46,071</b>
Supporting services:			
General administration	11,263		11,263
Marketing	1,167		1,167
<b>Total</b>	<b>12,430</b>		<b>12,430</b>
<b>Total expenses</b>	<b>58,501</b>		<b>58,501</b>
Increase (decrease) in net assets	12,051	(207)	11,844
Net assets at the beginning of the year	75,800	6,714	82,514
<b>Net assets at the end of the year</b>	<b>\$87,851</b>	<b>\$6,507</b>	<b>\$94,358*</b>

\* Includes SIG Fund balance of \$39,834K

ship conferences. SIGCOMM 13 was held this year in Hong Kong, and KDD 2013 in Chicago noted a 16% growth in participants over the previous year.

### Recognition

There were 147 new chapters chartered in FY14. Of the 36 new professional chapters, five were U.S.-based and 31 were based outside the U.S.; of the 111 new student chapters, 53 were established in the U.S. and 58 outside the U.S.

The ACM Fellows Program recognized 50 members for their contributions to computing and computer science in FY14.

ACM also named 40 new Distinguished Members in FY14, of which there were four Distinguished Educators, six Distinguished Engineers, and 30 Distinguished Scientists, bringing the total number of Distinguished Members to 371.

In the field of multimedia retrieval conferences, the Chinese Computing Federation Conference Rankings named ACM's International Conference on Multimedia Retrieval first in the world.

### 2014 ACM Award Recipients

**ACM A.M. TURING AWARD**  
Leslie Lamport

**ACM-INFOSYS FOUNDATION AWARD IN THE COMPUTING SCIENCES**  
David Blei

**GRACE MURRAY HOPPER AWARD**  
Pedro Felipe Felzenszwalb

**KARL V. KARLSTROM OUTSTANDING EDUCATOR AWARD**  
Susan H. Rodger

**OUTSTANDING CONTRIBUTION TO ACM AWARD**  
Donna Cappo  
Russell Harris

**DISTINGUISHED SERVICE AWARD**  
Gerhard T. Goos  
Juris Hartmanis  
Jan van Leeuwen

**PARIS KANELLAKIS THEORY AND PRACTICE AWARD**  
Robert D. Blumofe  
Charles E. Leiserson

**SOFTWARE SYSTEM AWARD**  
Coq  
Thierry Coquand  
G rard Huet  
Christine Paulin-Mohring  
Bruno Barras  
Jean-Christophe Filli tre  
Hugo Herbelin  
Chet Murthy  
Yves Bertot  
Pierre Cast ran

**2014 ACM-IEEE CS ECKERT-MAUCHLY AWARD**  
Trevor Mudge

**2014 ACM-IEEE CS KEN KENNEDY AWARD**  
Charles E. Leiserson

**ACM PRESIDENTIAL AWARD**  
Mehran Sahami

**DOCTORAL DISSERTATION AWARD**  
Sanjam Garg

**HONORABLE MENTION**  
Grey Ballard  
Shayan Oveis Gharan

**THE 2014-2015 ACM-W ATHENA LECTURER AWARD**  
Susan T. Dumais

**ACM INDIA DOCTORAL DISSERTATION AWARD**  
Ramprasad Saptharishi