Annual Report of the Publications Board

For the Period July 1, 2015 – June 30, 2016

Submitted by: Jack W. Davidson and Joseph Konstan, co-Chairs
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I.   Strategic Vision & Directions

The Publications Board seeks to maintain and strengthen ACM's position as the preferred publisher of computing research and to become the leading provider of advanced level information and services for the broader computing industry. The Board also seeks to maintain and strengthen ACM's position as the principal curator and steward of publication data for the field.

The Publications Board has a three-pronged approach to achieving these goals.

1. To develop the highest-quality impactful content within the *ACM Digital Library*

2. To ensure the continued growth and quality of the *Guide to Computing Literature*

3. To provide the best possible experience for ACM authors and readers.

Working closely with ACM Headquarters Staff, the Publications Board also has the added responsibility for ensuring the long-term sustainability of ACM's publications program by ensuring that ACMs publications-related business models and pricing remain competitive and relevant in the marketplace.

Launching new publications will be a fundamental component of strengthening ACM's publications portfolio. During the course of F'16, the Publications Board identified several key areas where expansion of the program through new publications and content types is likely to have the most impact in the future on the community.

The following areas are opportunities for research-level, practitioner-level, interdisciplinary and applications oriented publications, such as research journals, research & practice publications, case studies, best practices publications, reference works, handbooks, monographs, graduate level textbooks, blogs, podcasts, webinars, and video / multimedia content.

- Artificial Intelligence
- Robotics
- Gaming
- Cloud Computing
- Wearable Computing
- Biomedical Computing
- Transportation
- Smart Cities
- Internet of Things

In addition to laying the groundwork for future expansion of its publications program, ACM made significant progress with the following major publications initiatives during F'16:

- Open Access (CHORUS Participation, AuthorIzer, OpenTOC, OpenSurround, Hybrid OA growth, etc.)
- Software, Data, & Reproducibility of research results
- Proceedings of the ACM journal series
- Initiated the "Greenhouse" DL of the Future project

II. Basic Information

A. Members of the Publications Board

A list of members of the Publications Board during FY 2016 is given in Table 1.

Two new members were appointed to the Board during FY 2016:

- Terry Coatta, CTO of Marine Learning Systems, was appointed and serves as co-chair of the Practice Committee.
- Karin Breitman, EMC Corporation, was appointed and serves as co-chair of the Practice Committee.

There were no resignations in FY2016.

Table 1. *Members of the ACM Publications Board with Roles and Appointment Dates*

Ronald Boisvert *(NIST)* *Chair, DL Committee*	Original appointment: 7/1/97 – 6/30/00 Vice Chair for Electronic Publishing: 5/8/00– Reappointed: 7/1/00 – 6/30/03 Reappointed: 7/1/03 – 6/30/06 Co-Chair: 1/1/05 – 6/30/07 Reappointed Co-Chair 7/1/07 – 6/30/10 Reappointed Co-Chair 7/1/10 – 6/30/13 Appointed as member 7/1/13 – 6/30/14 Reappointed as member 7/1/14 – 6/30/17
Anne Condon *(University of British Columbia)* *Co-chair, Assessment & Search*	Original appointment: 06/01/15 – 05/31/18 Appointed Co-Chair of Assessment & Search Committee: 5/1/15 – 4/30/18
Jack W. Davidson *(U Virginia)*	SGB Liaison: 4/1/07 – 06/30/10 Appointed Co-Chair 7/1/10 – 6/30/13 Reappointed as Co-Chair 7/1/13 – 6/30/16 Reappointed as Co-Chair 7/1/16 – 6/30/19
Nikil Dutt *(UC Irvine)* *Chair, New Pubs Committee*	Original appointment: 7/1/08 – 6/30/11 Reappointed: 7/1/11 – 6/30/14 Appointed as Chair, New Pubs Committee: 8/1/14 – 7/31/17
Roch Guerin *(Washington U)* *Chair, Conferences Committee*	Original Appointment 3/1/13 – 2/29/16 Reappointed: 3/1/16 – 2/28/18 Appointed Chair of Conference Committee: 11/1/13 – 10/31/16
Carol Hutchins *(NYU)*	Original appointment: 1/1/97 – 12/31/02 Reappointed: 1/1/03 – 12/31/05 Term extended: 1/1/06 – 12/31/06 Term extended: 1/1/07 – 12/31/10 Term extended: 1/1/11 – 12/31/13 Term extended: 1/1/14 – 12/31/14 Term extended: 1/1/15 – 12/31/15 Term extended: 1/1/16 – 12/31/16 Term extended: 1/1/17 – 12/31/17
Yannis Ioannidis *(University of Athens)* *SGB Publications Advisor*	Original appointment: 7/1/14 – 6/30/16 Reappointed: 7/1/16 – 6/30/18
Joseph Konstan *(U Minn)*	SGB Liaison: 07/1/10 – 06/30/13 Appointed Co-Chair 07/1/13 – 06/30/16 Reappointed as Co-Chair 7/1/16 – 6/30/19

Catherine C. McGeoch *(Amherst College)* *Chair, Ethics/Plagiarism Comm.*	Original Appointment: 8/15/09 – 8/14/12 Reappointed: 1/1/13 –12/31/2015 Resigned: 5/23/16
M. Tamer Özsu *(U Waterloo)*	SGB Liaison: 12/01/02 – 11/30/04 Appointed regular member: 12/01/04 – 11/30/07 Appointed Vice Chair for New Publications, 7/1/07 – 7/31/14 Reappointed: 7/1/10 – 6/30/13
Mary Lou Soffa *(U Virginia)* *Chair, Journal Search and Assessment Committee*	Original appointment: 2/1/05 – 1/31/08 Term extended to 02/1/09 Reappointed 02/1/09 – 1/31/12 Term extended 2/1/12 – 12/31/15 Term extended 1/1/16 – 12/31/16 Term extended 1/1/17 – 12/31/17 Appointed Chair of Assessment & Search Committee: 11/1/13-4/30/15 Appointed Co-Chair of Assessment & Search Committee: 5/1/15
Alexander Wade *(Microsoft Research) Chair, Technology Committee*	Original appointment: 05/01/15 – 04/30/18
Terry Coatta *(Marine Learning Systems) Co-Chair Practice Committee*	Original appointment: 4/1/16 – 3/31/19
Karin Breitman *(EMC Corporation) Co-Chair Practice Committee*	Original appointment: 6/1/16 – 5/31/19
Keith Webster *(Carnegie Mellon University)*	Original appointment: 10/1/15 – 9/30/18

B.   Publications Board Meetings & Operations

Because of the increased activity, the growing number of projects, and the desire to regularly invite selected groups to a Board meeting (i.e., the EiCs, SIG leadership, members of standing committees), the Board added a third face-to-face meeting during F'16 to its regular schedule of monthly conference calls.

In addition, the co-chairs and HQ staff hold a monthly planning call and a number of the standing committees hold regular calls. Urgent issues are dealt with via email discussion and vote. The Publications Board has started a practice of inviting 12–15 Editors-in-Chief to one of its annual face-to-face meetings (dedicating a full day of its Fall meeting to issues of particular interest to Editors-in-Chief).

We should note that all of these "projects" are overlaid on substantial operations led by staff by overseen by the Board, including operations to implement compliance with government-OA mandates, operational improvements in the publication process (including cost savings), operational improvements in journals (including continued improvements in turn-around times and use of rapid online publication), and general improvements in the Digital Library.

III.   Committees & Project Updates

A.   Conference Committee & Projects

Members: Roch Guerin (chair), Crista Lopes, Jaudelice de Oliveira, Lance Fortnow, Koen De Bosschere, Machuda Glencross, Michael Hind, Steven Feiner, Tamer Ozsu, Mary Lou Soffa, Joe Konstan, Jack Davidson, Donna Cappo

PROCEEDINGS OF THE ACM: The Publications Board approved the first three titles of the PACM series and is working with SIGs to continue invite and review additional proposals for

conferences that want to migrate to PACM as a form of journal publications (with revision) for their full refereed papers. The first issues should appear in early 2017.

B. New Publications Committee & Projects

Members: Nik Dutt (chair), Susanne Hambrusch, Wendy Mackay, Tamer Ozsu, Carol Hutchins, Scott Delman, Laura Lander

The Committee is exploring new publications in several high-priority areas, including an ACM Transactions on Big Data and a Research and Practice publication on Digital Threats. Both are lengthy development processes (including working to find appropriate editors) and should be completed next year.

C. Digital Library / Technology Committee & Projects

DL Committee Members: Ron Boisvert (chair), Carol Hutchins, Changsheng Xu, Dina Papgiannaki, Gary Marchionini, Jack Davidson, Jonathan Grudin, Joshua Hailpern, Michael Lesk, Michel Beaudouin-Lafon, Roch Guerin, Samantha Merritt, Stephen Spencer, Bernie Rous, Wayne Graves, Scott Delman, Craig Rodkin

Technology Committee Members: Alex Wade (chair), Henning Schulzrinne, Mark Gross, Nick Dutt, Bernie Rous, Wayne Graves, Craig Rodkin

The Committee has made substantial progress with its work on Software, Data, and Reproducibility, including launching DL badging for articles that have artifacts available and those that have been replicated). We continue work on enhanced article formats and templates to better support small-screen devices, accessibility, and other uses of articles. We also continue work related to enhancing the DL in other ways including exploring (with outside partners) to archiving of executable code in stable environments and regular review and improvements in DL functionality and interaction (e.g., search, value-added associations and features).

D. Assessment and Search Committee & Projects

Members: Mary Lou Soffa (co-chair), Anne Condon (co-chair), Chris Hankin, Holly Rushmeier, Janie Irwin, Krishnendu Chakrabarty, Jack Davidson, Joe Konstan, Nik Dutt, Ron Boisvert, Laura Lander, Diane Crawford

The Committee finished regularizing the journal assessment process (with incremental and full evaluations at renewal and end-of-appointment), and have consistently been able to engage the community of each journal topic effectively in both evaluation and identification of the next EiC.

E. Ethics & Plagiarism Committee & Projects

Members: Cathy McGeoch (chair), Cherri Pancake, Ee-Peng Lim, Igor Markov, Joe Konstan, Deborah Cotton

In addition to regular review of allegations of plagiarism in ACM Publications and assistance to Editors and Program Chairs in handling complex plagiarism allegations in submitted and published work, the committee has been exploring a variety of policy issues related to authorship and author changes, including how to handle post-publication author name changes and starting a study of post-review author list changes to better understand the phenomenon.

F. Practice Committee & Projects

Members: Terry Coatta and Karin Breitman

Alain Chenais resigned due to time constraints. The Committee re-launched ACM's former "Magazines" Committee as a Practice Committee with closer ties to the Practitioner Board. Two members of the Practitioner Board, Terry Coatta and Karin Breitman, were asked to join the

Publications Board to provide input on the value of practitioner-focused publication proposals and expect to expand this effort in the coming year.

G. Business Working Group & Projects

Members: Joe Konstan (chair), Jack Davidson, Pat Ryan, Liz Zhang, Bernie Rous, Scott Delman

The Committee finalized a business model for SIG-sponsored OA volumes (that can be used for SIGs that wish to underwrite OA through conference fees), and made further progress on a plan to offer Gold OA journal options (choosing a direction that focuses on specific Editors and communities that have expressed this interest).

IV.   ACM Publications Portfolio

ACM is currently the publisher of 83 active periodicals, including 45 journals and transactions, 8 magazines, 30 newsletters, and a new series of advanced-level books called *ACM Books*.

During FY 2016, ACM added 592 volumes of conference and related workshop proceedings to its portfolio, which is a 24% increase over FY 2015. This growth included 129 volumes added to ACM's *International Conference Proceedings Series (ICPS)*, a 12.5% increase over FY 2015.

V.   ACM Digital Library

While ACM continues to print many of its journals and other publications, the ACM Digital Library (DL) continues to be the primary channel for delivering and reading ACM publications worldwide. In FY 2016, there were approximately 6 million users of the Digital Library, accessing the DL from 161 countries and generating approximately 18 million full-text downloads.

As one of the leading full-text and bibliographic databases of scholarly information for the computing community, the DL is widely accessible to individuals and institutions around the world. Out of ACM's roughly 110,000 individual members, approximately 26,000 subscribed to the DL in FY 2016.

In addition, the ACM DL is available at 2,903 institutions from over 60 countries around the world, including 188 government institutions and corporations.

During FY 2016, 26,900 full-text articles were added to the ACM DL, bringing ACM's total DL holdings to 421,000 articles.

ACM's *Guide to Computing Literature* is integrated with the ACM Digital Library, providing an increasingly comprehensive and freely available index to the top-tier literature of computing. During FY 2016, more than 146,000 works were added to the bibliographic database, bringing the total Guide coverage to 2.44 million works, an increase of 48% and 14% respectively as compared to FY 2015. Capturing article references in the database is important, because these references are necessary to develop robust citation statistics. ACM continues to expand the number of articles in which this data is captured.

Recent growth is as follows:

Year	Total References	Resolved in Guide
2008	6.3M	2.2M
2009	7.8M	2.8M
2010	9.8M	3.4M
2011	13.1M	4.7M
2012	16.8M	6.0M
2013	18.9M	6.7M
2014	20.8M	8.4M
2015	23.5M	9.2M

2016	25.9M	10.4M

Selling access to the institutional library market (i.e., universities, governments, and corporations) continues to be a healthy and stable near term revenue stream (5-7 years) for ACM, despite longer-term (7+ years) risks to the established business model, including the Open Access movement, Economic Risks, and Competitive forces in the scholarly publishing industry.

Pricing has been an important consideration for ACM and its customers, and in general ACM continues to maintain its position as a low-cost, high-quality provider, in comparison to its main competitors in the market, including IEEE, Springer, Elsevier, and Wiley. This continues to be the case for those large research intensive institutions with large computing programs, although is less the case with smaller institutions with less of a focus on computing, where important value metrics, such as "cost per download" continue to be a challenge for ACM.

Launching new publications and increasing the number of high quality articles published in the Digital Library will continue to be the main driver for increasing usage and decreasing "cost per download" for ACM's institutional customers

VI. Major Publications Board Initiatives

A. Open Access & Author Rights Policies

During FY 2016, the Publications Board continued to address the growing demand for greater public access to ACM Publications.

The Publications Board has been active in working to explore ways to balance the growing demand for greater public access to scholarly outputs and ACM's ability to satisfy this need in a sustainable way so that ACM will be able to continue fulfilling its mission over the long term. As a leading non-profit society, ACM utilizes surpluses from its publications program to fund a variety of good works initiatives, which include outreach efforts in India and China, outreach to women in computing, services for and outreach to practitioners, outreach to and support of K-12 education, curriculum development at the post-secondary level, and public policy work. Without a viable business model for ACM's publications program, many of these programs would be in jeopardy.

We regularly assess factors that may influence ACM's ability to maintain paid DL subscriptions, including national mandates to make research open. In the past year, in addition to continuing current policies and experiments offering authors a choice of copyright transfer, exclusive license, or author-paid OA with the option of non-exclusive licenses; offering authors the opportunity to provide free access to their articles from a personal or institutional web page through Author-Izer links; permitting conferences to make open their proceedings for one month surrounding the conference date; permitting conferences or SIGs to provide a Table of Contents of Author-Izer links to their conference proceedings; and the suite of author-retained rights ACM has long provided, we have taken the following additional steps:

- Approved in concept the creation of an umbrella Gold-OA ACM journal. The attempts to attract an organizing group and possible editor were unsuccessful. The Board believes we should broaden our OA offerings. Consequently, the Board is evaluating other options regarding Gold OA journals.

- In response to reduced publication costs, we substantially lowered the OA article processing charge for conference papers, in turn better aligning the charges for conference and journal articles with underlying costs and revenues.

- In response to continued pressure for additional steps to make content open, the Board began discussions regarding discontinuing the three-year experiment with OpenTOC and allowing SIGs to leave OpenTOCs up permanently.

  We conducted a survey of ACM Fellows, Authors, and Volunteers to gauge the attitudes with respect to publishing in conferences and journals and various OA models and the recently

launched PeerJ. Generally, the responses of the three groups were similar on most questions. Most respondents supported some sort of Gold OA journal offering with the strongest support for Gold OA editions of existing journals. Most ACM Fellows were not in favor of ACM pursuing a PeerJ type publication. The trend with Authors was not as clear. With respect to launching an umbrella Gold OA journal, most preferred Gold OA versions of existing journals. The survey was also sent to CACM readers and the results were consistent with the other groups. The Board is using the survey information gathered to help formulate and guide our strategies.

- ACM took a leadership role in the establishment and development of the CHORUS initiative (see www.chorusaccess.org), which is a publisher driven non-profit organization that provides for public access to government funded scholarly research. Over the past year, CHORUS has made significant progress by partnering with several of the largest U.S. federal funding agencies (DOE, Smithsonian, NSF*, USGS, etc.) to facilitate the availability of publicly accessible versions of the leading scholarly publishers journal and conference articles.

Issues of open access and DL sustainability remain high priorities for the Publications Board. We are exploring a variety of approaches, including agreements with some institutions (e.g., Google) to pre-arrange for open access to publications by their authors (through pre-payment of OA fees), and considering the types of services and value-added content that might form the core of a new revenue model if/when traditional subscription revenue is no longer sustainable. We do not see any imminent cliff, but recognize that there is a high-probability that our long-term revenue model will be very different from today.

B.   Diversity and Renewal Plans

The Publications Board chairs recognize that the Board, while well balanced by gender, is imbalanced geographically and trends towards longer membership terms. We have started a process of inviting new members into leadership, and will be working in the next year to: (a) set target end-dates for some of the most senior members; (b) recruit additional members with a focus on Europe and Asia which are underrepresented; and (c) draw upon ACM's broader volunteer pool to expand the committees with potential future Board members. We have already extended our industry representation, and expect to continue to do so as we populate the practice committee.

VII.   Other Ongoing Projects

A.   Journals Management

In FY'16 one new journal was approved for publication, *Transactions on Cyber-Physical Systems* (TCPS). In addition, the first issues of two previously approved journals, *Transactions on Spatial Algorithms and Systems* (TSAS) and *Transactions on Modeling and Performance Evaluation of Computing Systems* (TOMPECS), started publishing online in the Digital Library and in print. Migration of the old journal web pages into the new ACM journal template was completed. *Transactions on Mathematical Software* (TOMS) published its first paper with verified results as part of the ACM artifact reviewing initiative. Lastly, starting Fall 2015 the journals department started to work intensely with marketing and ACMs social media staff member to disseminate information about practitioner-oriented content in ACM's journals and to make those articles publicly accessible in the ACM DL.

B.   International Conference Proceeding Series (ICPS)

The ACM International Conference Proceedings (ICPS) is healthy and growing at a steady rate. We have seen a number of repeat applications for conferences, which is a good indicator of the satisfaction of the community with the ICPS service. In addition to the ACM India Council's review of applications from events held in India, Ron Perrott continues to rely on his editorial board to vet applications. In FY 2016,

ICPS produced 129 proceedings volumes from 45 countries outside the US. More than 750k DL downloads, roughly 4.2% were attributed to ICPS published articles. In addition to the 129 published volumes an additional 35 were rejected.

C.   Hybrid Open Access Program (Journals & Books)

In April 2013, ACM started offering authors the option to make their newly published articles Open Access in the ACM Digital Library by paying an Article Processing Charge (APC). This program was named ACM's Hybrid Open Access program. Since 2013, the program continues to grow and in FY 2016, there were 63 journal and magazine and 349 conference proceedings articles published with paid APCs generating net income of $243,360, which was rebated to ACM's academic library customers in the form of credits on DL licensing fees.