Practitioner Board

**ANNUAL REPORT**

September 2017

Submitted by Terry Coatta, Stephen Ibaraki [co-chairs 2016-2018]

**Summary**

The Practitioner Board has been operating since June 2005. The board itself meets via teleconference as needed and we have 2-3 face-to-face meetings a year. The board is actively engaged on the projects that we have undertaken and we have good staff support.

**2016/2017 Board Membership**

**Chairs**:

Terry J. Coatta  
Stephen Ibaraki  
  
**Members at Large**:  
Eve A. Andersson (PDC—Professional Development Committee)  
Stephen Bourne (Queue)  
Karin K. Breitman (Pubs)  
Alain Chesnais  
Adam Cole (Case Studies)  
Andrew Conklin (DSP—Distinguished Speakers Program)  
Michael G. Hinchey  
Srikantan Moorthy  
Dave P. O'Leary (MC—Marketing Committee)  
Toufi Saliba (CC—Conference Committee)  
Theo E. Schlossnagle  
Xiaosheng Tan

[Affiliated: Adrian Colyer (Morning Paper)]  
[Advisor: Peter Lee]  
[Advisor: Thomas Wiegand]  
 **ACM**Wayne Graves (IS Director)  
Pat Ryan (COO)  
Bobby Schnabel (CEO)  
Bruce Shriver (Senior Marketing Manager)  
Yan Timanovsky (Education & PD Manager)

**Overview**

The Practitioner Board operates primarily through a number of committees that address specific needs and programs. The achievements of the board are primarily the achievements of these committees and these are reported on in detail in the remained of this report. The primary focus of the board as a whole is the initiation of new projects and coordination, both of the activities of the committees, but also with other units within the ACM itself. In addition to this, the board plays a significant role in the acquisition of volunteers to work within the committees.

Notable achievements in this respect for this year are:

* The incorporation of the Distinguished Speakers Program into the Practitioners Board and the recruitment of Andrew Conklin as its chair including expansion of the program to address both the academic and practitioners’ audience.
* The formation of the Conference Committee and the recruitment of Toufi Saliba as its chair with the very successful launch of an event series that was oversubscribed in attendance and social media pickup.
* The appointment of Eve Andersson as the chair of the Professional Development Committee with new initiatives to engage practitioners.
* The formation of the Marketing Committee and appointment of David O’Leary as its chair with initiatives to engage active feedback in real-time.
* The formation of a Joint Practitioner Committee with the Publications Board and the appointment of Karin Breitman as its chair and strong engagement and feedback on proposed new books.
* The formation of the Metrics Committee and the appointment of Terry Coatta as its chair with Case Studies as its first program.
* The partnership with the Morning Paper, a popular daily blog on the most interesting research areas to practitioners with integration into the Digital Library for papers of interest and cross linking back to the Morning paper for a practitioner’s focused summary.
* The first time new international board members reflecting diversity with representatives from China, India, the EU, South America adding to the new board members for Canada and the US.
* Introduction of Advisor Board members representing significant communities and insights. Peter Lee Microsoft VP of AI and Research, Thomas Weigand, Executive Director from Fraunhofer, both notable researchers and executives.

The current set of committees of the Practitioner Board is:

* The Case Study Committee (CSC)
* The Conference Committee (PB-CC)
* The Distinguished Speakers Committee (DSC)
* The Marketing Committee (PB-MC)
* The Metrics Committee (PB-Metrics)
* The Professional Development Committee (PDC)
* [Affiliated program: Morning Paper]
* [Affiliated program: The Practitioners/Publications Joint Committee (PB-JPC)]

**Case Study Committee (PB-CSC) – Chaired by Adam Cole**  
**Membership**

* Adam Cole (President, HealthChain; Chair)
* Ken Britton (Director of Engineering, HootSuite)
* Terry Coatta (CTO, Marine Learning Systems)
* James Kempf (Principal Research Engineer, Ericsson)
* Chris McCubbin (Director of Data Science at sqrrl)
* Lucas Panjer (Senior Director, Engineering, Tasktop Technologies)
* Harry Saal (Chairman, Retrotope)

**Summary**

The mission of the Case Study Committee is to create high quality case studies targeted toward an audience of senior engineers. Case studies are based on actual engineering projects intended for production use.

The committee has produced two case studies thus far in 2017, one on a transition to microservices at HootSuite and another on choosing/using web development frameworks at Google. While the second of these is complete, it has been stuck awaiting approval from Google for several months. There are a number of case study opportunities being pursued, but it is unlikely that more than 1 additional case study will be published in 2017.

The rate of production of case studies is lower than expected. The committee has recognized that past experience no longer appears to be a source of good guidance in terms of the basic operational strategies for the committee. As a consequence of this, the committee is engaged in a process to significantly alter the basic strategies used to source material for case studies. The committee expects to see the results of these changes over the next 6 - 9 months.  
  
***Adjustments***

Based on what we have learned, we will be making the following adjustments:

* Increasing the number of case studies we put into the top of the funnel.
  + Opportunity: more case studies that make it through to publication.
  + Risk: there is a significant amount of chaperoning and coordination required for each case study in the funnel.
* Increasing the size of the committee.
  + Opportunity: broaden our network of candidate case studies
  + Risk: committee members must have a strong network they can call on along with the personality to be comfortable calling on favors.
* Amplifying expectations of committee members.
  + Opportunity: existing and forth-coming committee members can (a) identify, and (b) chaperone case study authors through to publication
  + Risk: all effort accrues to Mark and/or potential authors disappear or languish before they can be fully engaged.

**Current Activities**

**Migrating to Microservices**: Architectural considerations at Hootsuite’s migration from a monolithic architecture to microservices. Efforts to move functionality to the new platform have begun, with much being learned in the process.  
*Status*: published in May/June issue of *acmqueue*.

**Trends in Web Development**: Looks at an effort at Google to build an online corporate directory where the development team concluded mid-stream that it probably should have used the Angular framework for the job rather than Polymer. What followed from there? And what lessons were learned along the way?

*Status*: editorial done, waiting on Google for final approval.

**Data-informed Software Development**: Microsoft Research (MSR) has been sifting through code amassed over years of software development efforts at Microsoft to gain some insights into how the code review process might be streamlined — or, in some cases, eliminated altogether. What’s come of those efforts? And what techniques were employed to sift through all that code?

*Status*: Engaging with MSR.

**Blockchain for Transaction Reconciliation**: Considers why blockchain technology is now being used to address some particularly difficult aspects of transaction reconciliation between banks as well as some of the challenges the developers at Digital Asset have encountered in the course of building their Distributed Ledger Technology.

*Status*: Engaging with Digital Asset.

**Deep Learning - Neural Machine Translation**: Google discusses the effort involved in implementing Neural Machine Translation in Google Translate. “All kinds of interesting anecdotes fell out of that effort. First of all, there was a huge amount of systems effort involved in operationalizing a technology breakthrough of that magnitude. And then there also were a bunch of strange and interesting results that came about.”

*Status*: Initiating

***Learnings & Opportunities***

The Case Studies Committee is in the midst of a series of transitions (new chairperson, reporting to the Practitioners Board rather than the *Queue* Board) that, combined with changes in the dynamic of author engagement, have led to a need to re-evaluate the mechanics of case study production. The table below shows the case study opportunities that have been pursued in 2017. Of particular note is the number of case studies in which leads were pursued and confirmed, yet failed to come to fruition. This pattern is not reflective of past experience, but may represent the new "normal" and hence require a change of strategies.

The following table snapshots high potential case studies so far in 2017:

|  |  |  |
| --- | --- | --- |
| **Case Study** | **Stage** | **Comment** |
| Migrating to Microservices | Published | Complete |
| Trends in Web Development | Pending approval | 8+ months in same stage (despite regular promises from Google of ‘two weeks away’) |
| Blockchain for transaction reconciliation | WIP | Introduction from Neha Narula, an ACM friendly to Digital Asset took 3+ months. We had called this particular study dead and were just starting to move on when Neha came back from incommunicado |
| Data Informed Software Development | WIP | Similar as above. Terry has been able to wrangle the cats at MSR after multiple months of effort. |
| Deep Learning - Neural Machine Translation | Initiated | Queue has provided three leads for AI topics. We are pursuing this one as it has both the greatest promise and appeal. |
| Post Quantum Cryptography | Dropped | Promising leads all ultimately said ‘no’ as the material that makes for good case study is also highly sensitive to the authors’ corporations. |
| Big Data | Dropped | Lead subject, DJ Patel (chief data scientist for Obama WH) went into radio silence after signaling his intent to participate.  Initially considered Time-series analysis, stream analysis or even big data analysis. Decided opportunistically after seeing a number of dead ends |
| Fresh Approach to TLS | Dropped | Colm MacCarthaigh, an ACM friendly, has created an opensource version of SSL/TLS for AWS. Despite being open source, Amazon has said no to publishing. This is a new development -- but also part of a larger trend we are seeing |
| OWASP Top 10 | Dropped | OWASP publishes Top 10 web development vulnerabilities. The association had committed to working with us multiple times, yet the authors continuously never came through. |

The most significant learning we have witnessed this year is the changing dynamic of author engagement. Over the last few years we have witnessed a sharp rise in the drop off of committed authors. We attribute this to a combination of high-caliber individuals (the profile of our authors) having increasing demands for presenting, blogging, etc.; and, a tightening of corporate approvals to publically discuss case study materials (the approval process at both Google and Facebook has grown notably harder over the past two years).

**Future Plans**

***Expanding the Committee***

Invitations sent to:

* (Sara) Scout Sinclair Brody: Scout currently serves as Executive Director of Simply Secure and holds a Ph.D. in Cyber Security.
* Todd Underwood, Google’s Site Reliability Director: Todd spends much of his time focused on machine-learning-driven networking (something that’s especially important at Google now that it relies largely on software-defined networking). In any event, this puts Todd at the nexus of a number of different issues that interest us.

As mentioned above, we wish to expand our committee. We are reaching out through our professional networks, including GPAC, Queue, PB and PB-MC. Specifically we would like to see more diverse candidates - particularly from a gender and geographic perspective.

**Conference Committee – Chaired by Toufi Saliba**

**Membership**

* Toufi Saliba, PrivacyShell (PB-CC Chair)
* Mike Hinchey, Irish Software Engineering Research Centre (LERO), ACM PB
* Xiaosheng Tan, Qihoo 360, ACM PB

Expanding the conference committee is one of the goals of the PB-CC. **Summary**

The Conference Committee launched February 22, 2017, with Toufi Saliba as Chair. Progress tracked in the summary below is through August 31, 2017. The goal of AiDecentralized (<https://www.aidecentralized.com/>) is to tap into meetup groups in 25-30 major cities to collide 870,000 AI Practitioners with 250,000 Blockchainers. This could help convert a big chunk of them to become ACM members and contributors to the ecosystem.

The first pilot workshop expected 100 people, but **300** showed up. You can find some photos, video and information on AiDecentralized.com and samples of workshop outcomes on AiDeTeam.com. The event was the talk of the Tech Community in Toronto and attracted Silvio Micali, Turing Award recipient, notable Futurist Don Tapscott, Dr. Sergey Gorbunov. and many more. Standing room only!!

**Current Activities**

* Launched workshops. Initiated in 5 cities, executed in 1 city (Toronto).
* Setting a scalable model out of Toronto with quarterly Workshops and yearly summits.
* Quarterly workshops are free admission, average 100 to 150 people.
* Lined up some corporate sponsors and proven some in workshop.

**Future Plans**

* Annual city summits ~$600 pp full day summit expecting 1000+ people.
* Global Summit $2000+ pp 3 full days expecting 3000+ people.
* Partnered with several YouTube channels with focus on computer science audience in Blockchain and AI.

***Current Challenges****:*

* Finding underwriters to take on the initiatives of funding the minimum needed for those events to launch by giving an incentive to underwriters that isn't conflicting with ACM's initiative and goal. Those are numbers that can vary between $100K to $300K
* Finding AI Speakers that aren’t going to charge $125K even if event failed

***IMPORTANT***:

* If successful, the events could generate $50K to $400K in net profit per event.
* The potential is huge. The indirect benefits are getting the word to continue to be solidified

around ACM as #1 in computer science, driving members to sign up and audience to follow and

participate if/when they can.

**DSC (Distinguished Speakers Committee) – Chaired by Andrew Conklin**

**Membership**

* Andrew Conklin, Origent Data Sciences (Chair, appointed in 2017)
* Sebastian Borza, Jump Trading, LLC (appointed in 2017)
* Todd Chapin, Audible, Inc. (appointed in 2017)
* Robert Cordery, Fairfield University
* Gavin Doherty, Trinity College (appointed in 2017)
* Alexandra Mack, Pitney Bowes
* Evangelos Milios, Dalhousie University
* Alexandre Renteria, Jobzi (appointed in 2017)
* Valerie Woolard, Panoply (appointed in 2017)

**ACM Support Staff**

* Hugh Ffrench (ACM HQ)
* Cindy Ryan (ACM HQ)

We also have the **Nominations Subcommittee (DSC-N)**. Three members serve a 6-month-term, review incoming speaker nominations, and voting on acceptance. Current Members: Andrew Conklin, Valerie Woolard, Todd Chapin

**Summary**

The DSC is responsible for the oversight of the DSP (<http://dsp.acm.org>), including reviewing its scope, procedures, and policies to improve the effectiveness of the program.

As a new chair and member to the committee part way through the year, it is surprisingly clear to see that the FY 2017 saw a larger audience reach than prior years. We saw a 32% increase in audience reach over the average of the past several fiscal years. Our current New Speaker Prospecting list is 52% female, with an emphasis on up and coming practitioners. Our committee also added the past DC ACM professional chair, and she has recruited all female officers to run the DC professional chapter.

**Current Activities**

Our committee focus for the 2nd half of FY 2017 was to draw in more industry speakers and organizers. Here are our major highlights:

* 93 lectures were given with an audience reach of 22,631, beats prior fiscal years
* The United States (34) and India (20) had double digit lectures held
* Of the 56 speakers that gave a lecture, 77% were academic, while 18% were corporate
* 43% of requests came from chapters, 29% from university (non-chapters), 14% from conferences
* 12 speakers took part in 15 tours, 35 lectures, reaching an audience of 5,633
* The yearly cost of the DSP went up $6k from $68,759 in FY 2016 to $74,777 in FY 2017
* Speaker Nominations received declined below FY 2016 and FY 2015
* The United States (11) is the only country with double digit new speakers

**Future Plans**

The committee has efforts undergoing to do the following:

* Oversee a new public DSP website with responsive UI (<http://stg-speakers.acm.org>)
* Refreshing the Computing Topics in the DSP database and SEO
* UX Interviews to improve the Speaker and Organizer Journey through the DSP
* Proactive Speaker recruiting pipeline for up and coming practitioner leaders

For FY 2018, there is intention to rebrand the program to make it more compelling to startup and enterprise technical leaders. There is an anticipated budget request of 5K for this major enhancement. We aim to create a better routine for our committee members to engage and improve the program in the ways that interest them. In support of the rebranding, we are aiming to proactively bring in more practitioner speakers with a goal of growing our speaker roster from 125 up to 150, with 40 of them associating with corporate.

In the coming year, we will be engaging our committee members more, deriving more useful metrics for the organization, as well as overseeing core projects that put the DSP in the best position to serve the computing and entrepreneurship communities locally, regionally, and internationally.

**Marketing Committee of the ACM Practitioner Board (PB-MC) – Chaired by Dave O’Leary**

**Membership**

* Dave O'Leary, REDDS Venture Investment Partners (Chair)
* Frits Bussemaker, ‎CIONET
* Adam Cole, HealthChain
* Stephen Ibaraki, REDDS Venture Investment Partners
* Nithin Jilla, Dreams for Schools
* Elim Kay, Kay Family Foundation

**PB-MC Advisors**

* Alain Chesnais, TrendSpottr, SIGGRAPH
* Patrick Malone, Microsoft
* Robin Raskin, Living in Digital Times
* Deb Sorenson, C9|PR, Sorenson & Co

**ACM Support Staff & Ex Officio**:

* Caitlin Galietti, ACM Education & PD Assistant
* Sean Ryan, ACM Social Media and Marketing
* Bruce Shriver, ACM Marketing
* Yan Timanovsky, ACM Staff (HQ) Liaison

**Summary**

PB-MC started its work in October 2016 and since then has focused on two major projects GPAC, and Practitioner Focused Survey while contributing and executing other minor but important projects/support as detailed below. It has been my pleasure and honor as Chair to work with such a dedicated group of people, one where all contribute their unique and individual talent, experience, and amazing global contacts. We have our in-person meeting at ACM-HQ in New York on October 16th, 2017. From that meeting we will lay out our plan for the year ahead. I would like to add my deep sincere and personal thanks to Yan Timanovsky, Caitlin Galietti, Bruce Shriver, and Sean Ryan. Without their deep commitment to ACM and patience with and limitless hard work on behalf of the PB-MC committee none of the goals achieved in the report above could have been achieved.

**Current Activities**

Following its inaugural teleconference meeting on September 22, the Marketing Committee held its first in person meeting at ACM HQ in New York on October 18, 2016. At that time David O’Leary was installed as Chair and the committee terms of reference operational guidelines were detailed.

**Priorities established at in person meeting**:

1. Current practitioner audience member analysis with follow up input to the 2017 general membership survey. This input included:
   1. Identification of gaps in current practitioner audience data;
   2. strong support for a practitioner focused survey;
   3. suggestions for future projects such as brand enhancement;
   4. need for non-member research and analysis
2. PB-MC Oct 18th brainstorming results formed the basis for setting projects for the year ahead:

* Committee recommendation for a focused practitioner member survey  
   once current all member survey is complete
* Committee recommendation for analysis of global practitioner market segment   
  to find out what they want/need and why they are not currently ACM members.
* Kay Foundation offer of financial support for committee work from PB-MC member Elim Kay
* Hold monthly Teleconference meetings for first year.
* Establish project working groups to handle specific deliverables

**Projects and Initiatives:**

1. **Brand Enrichment through enhanced media usage**  
   Project underway e.g. Alain working with Bruce on automation of rich media insertion into marketing collateral using tools such as embedly.com; creation from Alain working with Sean of a free TrendSpottr widget for real time trend monitoring Committee member expertise / staff partnership projects underway e.g. Alain working with Bruce on automation of rich media insertion into marketing collateral using tools such as embedly.com; creation from Alain working with Sean of a free TrendSpottr widget for real time trend monitoring. Several methods have been tested and results will be reviewed at the PB-MC in person meeting at ACM-HQ October 16, 2017.
2. **Global Practitioner Advisory Committee**

This project set out to establish a real time interactive marketing intelligence gathering environment that could be used to guide marketing ideas and innovations as well as gather quick broad based (see demographics of the GPAC) input on a number of areas of interest and import to our marketing work. A PB-MC working group (Adam Cole [who came up with initial idea for GPAC], Alain Chenais, Elim Kay, Nithin Jilla, and Robin Raskin) was established with regular teleconference calls held to meet our May 1 launch deadline. Thanks to the working group and the dedication and expertise or ACM Marketing and Communication staff the GPAC went live on time May 1st, 2017.

**The Demographics of GPAC**:

* ACM Membership: Current ACM Members 58%, Past Member 11%, Non-Member 31%
* Gender: Male 73%, Female 27%
* Country: USA 47%, India 12%, Germany 6%, UK 5%, Brazil 5%, Elsewhere 25%
* Age: 22-25 11%, 26-30 30%, 31 to 35 38%, 41+ 10% (11% did not report age)
* *Data on job type, time in role, and size of organization are available in the Excel spreadsheet deck provided with a previous PB-MC update*
* Two important demographics outcomes of GPAC are that it is skewed younger and has nearly 30% female membership.

To date we have engaged the ACM Global Practitioners Advisory Community on two topics: ACM’s Case Studies and Skillsoft’s Virtual Practice Labs. A bit of detail is provided below to provide insight into GPAC’s value contribution. We have a number of other projects in the hopper for GPAC including assisting in question validation of our soon to launch Practitioner Focused Survey. Here is a snapshot of GPAC in Action being utilized by the Case Study Committee and the PDC:

**GPAC in action:**

Summary #1: Case Studies (CS)

* Discussion of ACM’s CS began on May 4 seeking input with Terry moderating.
* Members presented opportunities for CS, including big-data, data science, machine learning, artificial intelligence, UX design, and others.
* External resources of interest included the blog *The Green Place* and the *CIO/CSO* newsletter IDG, blog posts in Twitter, Reddit, and Hacker News.
* Feedback provided on *Queue* CS: “React: Facebook's Functional Turn on Writing JavaScript,” and “A Purpose-built Global Network: Google's Move to SDN.”:
  + - More code examples and some visual aid like diagrams or screenshots
    - More structured approach where you have - abstract, problem, methodology, results, and conclusions
  + Adam Cole, suggested a SurveyMonkey poll to quantitatively understand the topics members would most like for future CS

Summary # 2: Skillsoft Virtual Practice Labs

* Positive feedback received
* Labs for learning purposes, but not for seeking certifications
* Will demo the Virtual Labs
* This conversation is ongoing.

**Future activities for GPAC**

* Gather input on potential new products and services that figured prominently in ACM’s recent membership research study, including:
  + - * Curated news content
      * Tutorials & technical forums on applied topics
      * Practical applications of research findings
      * Periodic summaries of anticipated future trends
* As we learn from the two projects undertaken to date we will optimize the size and composition of GPAC.

1. **Promotion of PDC Webinars and ACM Events**
   1. PB-MC members were provided with trackable links that could be easily embedded in their own individual networking media with a goal to promote ACM PDC Webinars and select ACM events. Data is being collected to assess the effectiveness of doing this. Anecdotal feedback has been positive, data will be reviewed at the upcoming PB-MC meeting at ACM-HQ in New York.
   2. Thanks to a relationship based introduction from PB-MC member Frits Bussemaker. PB-MC established an initial “shared value” partnership with Alejandro Debenedet, founder of ITWNET <http://www.itwnet.com>. The first joint effort was Alejandro promoting the PDC BlockChain webinar to his 200,000+ members. Conversation is ongoing for further partnerships, including promotion of webinars as well as offering a discounted ACM membership to ITWNET members.
2. **Practitioner Focused Survey**
   1. Work commenced on this project in April and is ongoing.
   2. PB-MC working group of Deb Sorenson, Alain Chenais, Dave O’Leary, along with ACM Staff Bruce Shriver, Sean Ryan and Yan Timanovsky laid out the ground work and supported the survey company selection process.
   3. The project is on target for a September 2017 Launch.

**Future Plans**

***Special Addendum*:**  
***Ideas for enhancing PB-MC committee with new/younger members, from diverse geographic areas, as well as to address ways of creating a better balance with respect to industry/academia, gender, and other under-represented groups.***

PB-MC currently has membership from United States, Canada, and the Netherlands. Membership of the committee proper is all male; though two of four advisors are women.

First of all as chair I am happy to see this question posed as a part of our report. It is a true leadership question that highlights one of our great challenges. Personally I see one obvious way of adjusting demographic composition. That is through deliberate and targeted invitations as current individual appointments come to term. In our experience creating GPAC we deliberately set out to skew younger and towards a (targeted) 30%-women member composition. This deliberate approach netted us the younger average age 79% below age 35 (11% did not report age) and 27% women members. This is one example and perhaps we can ask the GPAC group for their ideas on how to be more inclusive. I do believe that as we understand our practitioner audience better we will be more effective in attracting those whom we have not done so well attracting in the past (younger and female members). The Practitioner Focused Survey currently underway will help here. In the meantime I will add this topic to our PB-MC agenda for October 16th.

**Professional Development Committee (PDC) – Eve Andersson as Chair**

**Membership**

* Eve Andersson, Google (Chair; appointed July 2016)
* Sue Black, TechMums (new member, joined July 2016)
* Don Gotterbarn, East Tennessee State University; SIGCAS, ICCP
* Dominic Holt, SOLUTE
* Stephen Ibaraki, REDDS Venture Investment Partners
* Bradley Jensen, Accenture; ICCP
* Juan Miguel de Hoya, DigitalFish and Google Spotlight Stories; SIGGRAPH (new member; joined April 2017)
* Srikantan Moorthy, Infosys
* Dave O’Leary, REDDS Venture Investment Partners
* Will Tracz, Lockheed Martin Fellow; SIGSOFT

**ACM Support Staff**:

* Yan Timanovsky (ACM HQ)
* Caitlin Galietti

**PDC members on Practitioner Board**:

Eve Andersson  
Stephen Ibaraki  
Dave O’Leary  
Tan Moorthy

**Webinar Subcommittee (PDC-W)**:

Will Tracz (chair), Eve Andersson Stephen Ibaraki, Yan Timanovsky (ACM HQ)  
 **Professionalism and Certification Subcommittee (PDC-PCC)**:

The PCC is charged with scanning the computing professionalism, licensing, and certification landscape for important new developments so ACM is prepared to act if necessary. Three members are also in the ICCP where the ACM is a founding member. It consists of:

Eve Andersson (chair), Don Gotterbarn (ICCP board ACM rep), Brad Jensen (ICCP board ACM rep), Stephen Ibaraki, Srikantan Moorthy, Yan Timanovsky (ACM HQ).

**Summary**

In FY2017, the PDC participated in bimonthly teleconferences and had its annual in-person meeting San Francisco in March 2017. There will be one in-person meeting in FY2018 and it will take place in San Diego October 19, 2017.

The successful webinar series continues to be the most exciting program from ACM Learning. Two talks on Deep Learning, Jeff Dean’s (recipient of ACM Prize in Computing, formerly known as Infosys Award) and his TensorFlow team at Google Brain, broke all records, with 6,700+ registrants and 2,400+ live attendees for the TensorFlow talk. Other “mega” events included Peter Norvig’s Town Hall, the Blockchain webinar, and Tom Mitchell’s talk on Machine Learning and the human brain.

The ACM Learning Center has grown in content. Notable, our Safari collection has gone from 700 custom books and videos to 45,000+ books, videos, conferences proceedings, tutorials, learning paths, case studies, and live learning—all on Safari’s latest learning platform. Deals with Skillsoft and Elsevier were also renewed, with Skillsoft brining in significant increases in coverage of Cloud/Virtualization and DevOps/Sys Admin knowledge areas, and Elsevier ebook content likewise increasing (nearly 3x) on the new ScienceDirect platform.

**Current Activities**

1. **ACM Learning Webinars**

The successful webinar series continues to be the most exciting program from ACM Learning. FY2017 speakers included ACM award winners and established technology influencers, as well as up-and-coming researchers and practitioners. We are making a concerted effort to include a more diverse pool of webinar participants, with a special focus of greater gender distribution. We also experimented with new formats, including town-hall, panel, and pre-recorded “skit.”

Monthly ACM Learning Center bulletins profiling ACM value, products, and services reach more than 97,000 professionals, Webinar bulletins reach approximately 400,000 professionals, ~80,000 prior registrants (“VIPs”), and through ACM PDC member social media and media channels over 10 million potential audience reach. In FY 2017, Jeff Dean’s talk on Deep Learning was a “mega” event, leading to an all-time-record event drilling down into TensorFlow with the Google Brain engineers who built it. The second biggest event of the year, Peter Norvig’s “Town Hall,” was fully question based. Tom Mitchell’s talk on using ML to study the brain and human language was both popular and extremely highly rated. Mark-Mueller Eberstein’s talk on Blockchain had the highest interest outside of AI-focused talks, indicating high demand for more talks on the topic. Talks by enthusiastic ACM member practitioners (e.g., Luciano Ramalho from Brazil and Paul deGrandis of Cognitec) were also successful.

In 2017, we also added a discussion component by integrating ACM’s new Discourse page. Thus far, engagement has been mixed and depends heavily on webinar presenters’ willingness to engage/moderate before and after the live events. Due to busy calendars and volunteer nature of the Webinar program, this is a challenge.

A deeper dive into FY2017 webinars:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Title** | **Reg** | **Attend** | **Total Attend%** | **Att: Live** | **Att: OD** | **Satisfaction%** | **% Practitioner (survey)** |
| Monadic Programming for the Web Using React and RxJS (Pat Sissons) | 1455 | 674 | 46.3% | 382 | 333 | 75% | 82.5% |
| Using Machine Learning to Study Neural Representations of Language Meaning (Tom Mitchell) | 3736 | 1971 | 52.8% | 1193 | 946 | **97.7%** | 68.6% |
| Application Management with Kubernetes (Kelsey Hightower) | 1659 | 765 | 46.1% | 533 | 270 | 88% | 82.1% |
| Preventing Information Leaks with Policy-Agnostic Programming (Jean Yang and James Mickens) | 1765 | 765 | 43.3% | 470 | 355 | 86.4% | 81.4% |
| The Next Radical Internet Transformation: How Blockchain Technology is Transforming Business, Governments, Computing, and Security Models (Mark Mueller-Eberstein) | **4462** | 2337 | 52.4% | **1369** | 1144 | 91.9% | 81.6% |
| Speaking Data: Simple, Functional Programming with Clojure (Paul deGrandis) | 2129 | 1031 | 48.4% | 546 | 532 | **95.1%** | 77% |
| Current Trends in High Performance Computing and Challenges for the Future (Jack Dongarra) | 2279 | 1377 | **60.4%** | 833 | 682 | **95.4%** | 66.8% |
| Panel and Town Hall: Big Thoughts and Big Questions about Ethics in Artificial Intelligence (Joanna Bryson, Francesca Rossi, Stuart Russell, Michael Wooldridge) | 1982 | 990 | 49.9% | 629 | 439 | 85.8% | 59.3% |
| Town Hall with Peter Norvig on A.I., Machine Learning, and More | **5687** | **2944** | 51.8% | **1826** | 1285 | 91.6% | 70.3% |
| TensorFlow: A Framework for Scalable Machine Learning (Martin Wicke, Rajat Monga) | **6724** | **3855** | 57.3% | **2420** | 1789 | 94.5% | 70.7% |
| Generators: Powering Iteration in Python (Luciano Ramalho) | 3090 | 1508 | 48.8% | 928 | 672 | 91.1% | 77% |
| Embracing Open Data Science in Your Organization (Christine Doig) | 2924 | 1252 | 42.8% | 749 | 567 | 93.4% | 73.4% |
| Evolving Critical Systems (Mike Hinchey) | 1286 | 595 | 46.2% | 366 | 254 | 87.7% | 79.9% |
| Large-Scale Deep Learning with TensorFlow for Building Intelligent Systems (Jeff Dean) | **5274** | **2929** | **55.5%** | **1708** | 1523 | **96.2%** | 66.5% |

**Other notes** on Webinar Program: Based on post-event surveys, practitioner attendance has continued to been high (over the past year, in the 60-82% range). Awareness and repeat attendance has also been very high (among the most recent events, ~75% of attendees report having attended other ACM webinars).

Since the beginning of FY2017, we’ve been collecting additional registration fields (country, gender, age range, practitioner role) in order to align data collection with other ACM products and services. There has not been any noticeable impact on the webinar program in terms of registration.

1. **ACM Learning Center: Books, Courses, Videos**

The ACM Learning Center is getting major overhaul, with a massive increase in Safari content (premium content with a practitioner focus) and significant increases to Skillsoft and Elsevier assets, including new platforms with more user-friendly UIs and a new, unified SSO authentication protocol using SAML and IdP.

***Safari***

In June 2017, ACM made a significant upgrade of its Safari offering, with a new platform and vastly larger collection of learning assets, taking ACM members from a custom collection of 700 books and videos to ~50,000 total learning assets. Future updates will be given on usage, which will be closely monitored due to a strict cap on the number of seats available to ACM members.

* New Safari Learning Platform, offering entire collection of 40,000+ books, 5,000 video courses and all O’Reilly conferences, hundreds of learning paths, tutorials, case studies, and live training (similar to ACM Learning Webinars).
* New mobile app, mobile and desktop UI with recommender system
* Full content access, drastically reducing ACM PD and IT burden of “book swaps”

***Skillsoft***

In July 2017, ACM renewed a contract with Skillsoft, increasing the content collections of books, courses, and videos while simultaneously decreasing the cost to ACM. ACM will not be penalized for its exceeding its seat cap (negotiated). In addition to existing collections on software development, networking, databases and data management, cybersecurity, project management, major new additions include the Cloud/Virtualization and Sys Admin/DevOps collections, growing our total #s of books and courses as follows:

* ~1,300 courses 🡺 ~1,750 courses
* ~3,500 books 🡺 ~4,800 books

Usage will be tracked and compared to past usage in future updates.

***Elsevier***

In August 2017, ACM completed the transition from a previous offering (standalone PDF and ePub downloads) to Elsevier’s ScienceDirect platform. This transition nearly triples our total collection of titles while reducing the Elsevier rate by more than half.

The new ScienceDirect collection features:

* 1,200+ ebook titles from Morgan Kufmann, Syngress, other publishers (up from ~450)
* End to previous 6-month embargo (ACM has all books in Elsevier’s Computer Science collection as soon as they are released).
* DRM-free access via downloadable PDFs.
* Unlimited seats

Usage will be tracked and monitored, as deal will be up for renewal in December 2017.

1. **Podcasts**

More than 120 podcasts/interviews/articles w/industry leaders (done by Stephen Ibaraki with no labor or financial impact to the ACM—funded by Stephen).

The interviews are also now part of this project: Computing Educators Oral History Project <http://www.southwestern.edu/departments/mathcompsci/OHProject/other-ohprojects.html> and can appear with the ACM Turing pages.

The interviews in the ACM Learning Center are referenced in the United Nations ITU media/blogs (example, interview with ACM President Vicki Hanson appeared in five channels with the UN ITU); Digital Africa Conferences; Financial Services Roundtable (top 100 CEOs with 92.7 Trillion USD in managed assets, 1.2 Trillion in annual revenue, 2.3 million employees).

ACM interviews linking to the ACM Learning Center appear as blog articles in IDG-IT World (Canada). IDG (all brands) global audience is ~200 million, ~100 countries.

**Other PDC Projects, Updates**

* + As part of ACM’s commitment to “Computing for a Social Good,” partnership between ACM and Social Coder (and founder Ed Guiness) went into effect in spring 2016. This was a PDC project spearheaded by Dave O’Leary with assistance from Dominic Holt and Don Gotterbarn.
  + Volunteers have been signing up for ACM membership steadily since June 2016, with a significant spike in February 2017 sustained to date.
  + Approximately 120-160 new members per month are currently joining through the SocialCoder partnership
  + Anecdotally, demographics of these members skew younger and more international. More analysis will be done.
* CompTIA partnership providing members with discount on training continues to have good uptake.
* PDC members Will Tracz and Tan Moorthy’s Infosys colleagues have helped evaluate ACM Papers with Practical Content (<https://www.acm.org/publications/practical-content-papers>), selecting 2 papers they found useful. Will Tracz also provided feedback.
* PDC member Brad Jensen has been elected President of the ICCP (Institute for Certification of Computing Professionals). ICCP is rolling out a new certification in 2017, the Certified Big Data Professional.

**Future Plans**

* ***Webinars***: The FY2018 calendar has several heavy hitters scheduled/completed already, including Eric Horvitz, Fei-Fei Li, Turing Winner Silvio Micali, and Jonas Boner. An AI/Machine Learning “series” is planned and will likely package Tom Mitchell, Eric Horvitz, and Fei-Fei Li’s talks.
* ***Learning Center***:
  + Moving away from granular listing of all assets in Learning Center to selective deep-linking.
  + Plans to send out more bulletins rotating highlights of new releases and trending topics in Safari, Skillsoft, and Elsevier collections.
  + In FY2018, plan to integrate Learning Center into ACM.org website to align look, feel, branding, and user experience.
  + Working with IS, unify login using SAML and IdP. Already completed with Safari and Elsevier, working on Skillsoft.
  + Measure usage of new Safari platforms, as well as Skillsoft and ScienceDirect.
* ACM “Tech Talk” pilot (18-20 minute videos to be recorded and distributed on-demand) planned for Q3-Q4. First speaker may include Francesca Rossi, TBD. Production and distribution will be done using ACM’s On24 webcasting platform.
* PDC members Juan Miguel de Hoya and Dominic Holt are working on a proposal toward an updated version of “Tech Packs” with a goal of making them useful to practitioners, refreshable, and sustainable. A proposal is expected to come in Q3 2017 and will be discussed at the next F2F in October
* In winter 2017-18, we will start to look at retention figures for these new members via SocialCoder
* Further partnerships may be considered, especially with the launch of the ACM PB-Marketing Committee and those members’ networks.
* Greater cooperation between PDC and PB-MC and its GPAC Slack channel for feedback on PD resources and new products.

**Metrics – Chaired by Terry Coatta**

The metrics committee has completed its analysis of relevant metrics for the Case Study program, and those metrics have been forwarded to ACM staff for implementation. Once implemented, a summary of those metrics will be included in subsequent annual reports and shared in a Google spreadsheet. The metrics committee is now planning to work with the PDC in order to develop a set of metrics for the Webinar series.

***The Morning Paper* Blog – Wayne Graves as Main Point of Contact with Adrian Colyer**

Publishedweekday mornings with 7K audience, highlights important research for practice papers selected by **founder Adrian Colyer**. Wayne Graves has piloted opening ACM DL articles covered in *The Morning Paper*. Wayne has created a “trusted site” automated mechanism that enables Adrian to accomplish this task.  The mechanism also exposes *The Morning Paper* summary to users of the DL via a link placed just after the abstract. A few other items are in discussion with Adrian such as providing Adrian a feed of “Papers of Practical Interest” from the journals via reviewer recommendations, help with mechanics/logistics in running *The Morning Paper*, marketing and content expansion.

There are currently 9 posts within *The Morning Paper* that have taken advantage of this “trusted site” mechanism. Here are two recent examples:

* <https://blog.acolyer.org/2017/02/16/beyond-the-words-predicting-user-personality-from-heterogeneous-information/>
* <https://blog.acolyer.org/2017/04/06/detecting-rop-with-statistical-learning-of-program-characteristics/>

When you click through to the ACM Digital Library pages you can see links back to *The Morning Paper* just below the full text link as well as just below the abstract. These links will drive traffic and add to the discoverability of *The Morning Paper*.

In a post from 4/10/2017, <https://blog.acolyer.org/2017/04/10/end-of-term-and-thank-you-to-the-acm/>, Adrian thanks ACM for setting up this mechanism: “…I’d also like to say thank you to the team at the ACM who recently worked on a mechanism to provide open access to any paper from the ACM Digital Library that is covered on The Morning Paper.”

**Publications/Practitioners Joint Committee – Karin Breitman as Chair**

The group is transitioning from an ad hoc collection of members to a formal committee. The creation of the subcommittee wasapproved on May 1st by the Practitioners Board and later sanctioned by the Publications board. The goal of said subcommittee is to help develop 2-3 new publication projects in the next 12 months that are tuned to industry trends and the needs of the practitioner community. To this effect, we are in the process of forming the group, whose first meeting should take place in the beginning of September. The first line up is as it follows:

* Jing Yang, AI Era, China (confirmed)
* Inés Sombra, Papers we Love, US (confimed)
* Rafee Tarafdar, Infosys, India (confirmed)
* Adrian Colyer, EU (to be confirmed)

As liaisons to the Practitioners Board, Terry and Karin helped shape the proposal for a new journal entitled ***Digital Threats: Research & Practice***, evaluated two book proposals (digital project management and IoT), and are supporting the search for potential new authors for the ACM book series.

**Other Activities**

**Entrepreneurship program**

There is continued interested in supporting the entrepreneurship program via SIG conferences (VC office hours, DSP program, podcasts/webinars. Stephen sits on the current 4 person task force and more volunteers from the PB are solicited. Stephen profiled the ACM plus the entrepreneurship program while keynoting in Beijing, Shanghai, and Shenzhen in July.

**External activities spotlighting ACM value**

As founding chair of the Technology Advisory Council, Stephen is a founder of the Financial Services Roundtable (FSR) Fintech Ideas Festival (invite only, top 200 CEOs in tech, financial services, fintech; ~100 Trillion in managed assets). FSR is the most influential trade organization in financial services representing top 100 CEOs in financial services with 92.7 Trillion in managed assets. The Festival was the most successful of its kind with CNBC as the media partner with an audience of 340 million and trending No1. on social media. <http://www.itworldcanada.com/blog/top-ceos-and-futurists-on-the-future-of-financial-services-and-technology/389899>. The ACM is now known for its leadership in computer science.

Stephen is a founder of UN ITU XPRIZE AI for Good Global Summit (21 UN organizations, 500 top participants (government, industry, research, civil society, academia, media), 47 major media, 300 million media audience and 30 million social media, the largest and most successful event of its kind. <http://www.itworldcanada.com/blog/the-summit-of-ai-for-social-good/394270>. The ACM was prominently featured at the summit including in blogs, media, interviews.

Stephen chaired and keynoted at the UN ITU World Telecommunications Standardization Assembly held every four years, UN ITU Telecom World and Kaleidoscope (annual flagship events) where he spotlighted ACM value in his sessions. This includes writing for their magazine, newsletter and blogs. The audience is 193 country governments, 700/800 corporations/organizations and research institutes//universities that make up the UN membership. Stephen addressed the United Nations in New York as well in his work.

There is much more however this gives a sampling of external activities advocating on ACM value.