On Chairing SIGPLAN

June 24, 2015

It was an honor to be your chair for the last three years.

Programming language research is a fascinating and lively area of intellectual investigation. New applications extend the boundaries of our discipline, taking it in exciting directions while building on decades of work. Chairing SIGPLAN gave me a window on the breadth of our field, I am grateful for that opportunity.

I'll speak to achievements of this Executive Committee (EC) and challenges we leave our successors.

Allow me to start by mentioning one of the rewards of being Chair of SIGPLAN, namely, the pleasure to work closely with an amazing EC consisting of Jeremy Gibbons (vice chair), Andrew Black (secretary), Derek Dreyer (awards czar), Sue Eisenbach (Reynolds thesis award), Mike Hind (research highlights), Julia Lawall (travel grants), Crista Lopes (treasurer), Norman Ramsey (master of the style sheet), Phil Wadler (past chair). While we did not always agree, deliberations were always friendly and constructive. I learned much from them. Last but in no way least, I thank Andy Gill for his excellent service as Information Director,[1] and Fran Spinola for her kindness and the patience she showed with my dealings with ACM HQ.

What's the role of a Special Interest Group?   I confess to have given little thought to this question before being thrust into the job. Your feedback on the SIGPLAN open access poll[2] included the following:

1. **Facilitate scientific exchanges.** SIGPLAN's role is to organize conference, workshop and other scientific meeting as well as to communicate with membership through means such as mailing list and newsletters. Social media (Facebook, Google+, Twitter) must also be included in the mix.

2. **Promote the discipline.** SIGPLAN's role is to promote our programming language research within computer science and, more broadly, within society, and also ensure that our research is as visible and as broadly available as possible.

3. **Be inclusive.** SIGPLAN's role is to promote fairness in the scientific evaluation process while maintaining the highest possible standards. SIGPLAN should be welcoming of underrepresented minorities and young researchers who are curious about PL.

The EC made progress on several fronts along those three axes.[3]

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[1] Andy set up `sigplan.org` and edited SPN `dl.acm.org/citation.cfm?id=J706&CFID=68325802`.

[2] See `janvitek.org/whoowns.html`

[3] We also tried to spend down our bank account but failed. We had a balance of $2.4 million in '12, and $2.6 in May '15.

Conferences. SIGPLAN conferences are healthy. More than healthy in fact: they are growing. Any of the big four, ICFPL, POPL, PLDI, SPLASH, routinely sees 400 attendees, sometimes considerably more,[4] as many as 15 co-located events, a programming contest, a student research competition, and an artifact evaluation committee. Organizing one of them is an immense amount work that is entirely up to volunteers usually between 10 and 20 academics and industrial researchers. The brunt of the work goes to the General Chair (GC) who will spend the better part of a year on a conference. The ACM provides legal and financial support, but little else. In my experience, we can't even rely on the ACM getting us the best venue. GCs regularly take over the negotiations with hotels because ACM staff doesn't fully understands our requirements.[5] In a time of raising costs, getting the right venue at the best possible price is crucial.[6] We can't push this much work on our volunteers and it's unreasonable to expect them to learn the intricacies of event organization.

The EC has worked to streamline the process of organizing a conference in four areas: *conference management* (venue selection, event planning, budgeting, onsite management, reporting), *registration mangement* (pricing, payment, communication with attendees, onsite support), *submission management* (hosting, submission, reviewing, PC meeting, proceedings preparation), *web site management* (design, automated population, editing, hosting). Our goal was to reduce the intellectual and time investment required of volunteers in these areas. We established long term relationships with providers to create an institutional memory separate from the volunteers who naturally rotate in and out of these positions.

We had to overcome resistance from the ACM. One example is registration management. SIGPLAN chose to work with Carole Mann's company RegMaster. Carole has been with us for my entire professional career. Carole provides services that competitors can't match. She knows how we operate, so she can *do the right thing* without any prompting from the chair. She provides on site assistance, real-time reporting, as well as historical data on registration pick up. Even after clearly indicating to the ACM that she was our preferred provider, ACM staff keeps pushing GCs towards competitors. And, when we co-locate with FCRC, there is absolutely no question of using her services. SIGPLAN has now a standing contract with RegMaster and part of my role is to make sure that GCs are made aware of this.

Event management worked out better. SIGPLAN contracted the services of London-based PCK, operated by Annabel Satin, to help with all stages of preparing, running and reporting on the outcome of our big four conferences. With several years of experience with our conference, Annabel is able to fill out the ACM forms, deal with sponsors, caterers, AV providers, etc. She is a valuable right-hand women for any GC.

Submission, reviewing and proceedings preparation are major tasks for Program Chairs. SIGPLAN has contracted Eddie Kohler to develop a hosted version of his popular HotCRP software thus shielding chairs from installation and maintenance.[7] We are now able to archive the reviewing histories of our conferences, and, in the long term, will use that data to study bias in reviewing.[8] Our contract includes support for new features and the right to ask up to three questions a day.

Managing a large web site is a complex task. After discarding a SPLASH's homegrown content management system, we contracted Eelco Visser to use his WebDSL language to develop `researchr`. The system was deployed for SPLASH'14 and PLDI'15, but it still takes more time then most GCs are willing to invest to create a good site.[9] The next EC should select professional web master to reduce that effort. While the software needs work, it already has useful features such as the ability upload the conference program from HotCRP and users profiles that can be accessed across all conferences that use the system.

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[4]Only SPLASH is below historical maxima, it was in the thousands last century. Attendance figures are: IFCP (Copenhagen '12: 484, Boston '13: 505; Gothenburg '14: 485), PLDI (Seattle '13: 473, Edinburgh '14: 427), POPL (Rome '13: 540, San Diego '14: 533, Mumbai '15: 463), SPLASH (Tuscon '13: 449, Indianapolis '14: 627, Portland '14: 491).

[5]In Europe ACM uses contractors who negotiate deals with hotels. These contractors get up to 15% of the hotel bill. We had to convince ACM to allow us to do our own negotiations.

[6]Organizing events in commercial venues such as hotels or conference center can be cost effective (and less work for volunteers). For example, bringing an external caterer to a University may end more expensive than having a hotel take care of food and beverages when all (e.g. rental of tables and chairs) is accounted for.

[7]Setting HotCRP simply requires filling the form at `hotcrp.com`.

[8]Since 2014, HotCRP has had a splash screen notifying reviewers that SIGPLAN could data mine their reviews.

[9]As a measure of effort, I spent roughly one day a week for six months on ECOOP'15 site, `2015.ecoop.org`.

Communication. SIGPLAN used to rely on its newsletter, SIGPLAN Notices, and on monthly e-mails sent by our information director for communication with our members. Over time, Notices has become a vehicle for publishing conference proceedings. This for two reasons, (1) finding content for regular issues is hard, and (2) conferences are clamoring to be included. That latter fact bears explaining. The main reason conferences want to appear in Notices is that, for an unknown reason, Notices is being indexed as a journal and its impact factor is respectable.[10] For the first time this year all issues of Notices will be special issues. The next EC will have to decide whether to retain Notice in its current form.[11] The mailing remains an effective means of communication, although it only reaches a small part of the PL community. The people who receive our mails are the SIGPLAN members who have not opted out of all email communications, a relatively small group. The next EC should consider how best to use social media to reach the broadest cross-section of the community.

Open Access. Promoting our discipline requires that the outcomes of our research efforts be widely available. The ACM Digital Library requires subscription to access its content. When this EC took office, ACM had introduce author's fees in excess of $1,000 to publish papers in open access. A survey of a broad segment of the community, revealed that a majority of our members considered open access to be a *moral imperative* and that they were willing to consider *alternate publishing options* if ACM refused to offer a true open access option.[12] SIGPLAN strongly (but not always tactfully) advocated for open access. Some steps forward include: a reduction of the author fee by over 50%, the ability to host unrestricted access links from the conference web page for a year, and the possibility for a SIG to pay for open access of an entire conference at a reduced rate.

Repeatable Research. In our field software artifacts play a central role. The SIGPLAN EC believes that promoting our discipline implies putting software in its rightful place. We have introduced the notion of *Artifact Evaluation* as part of a conference's review process. Authors of accepted papers are encourage to submit artifacts that will be evaluated by a separate committee and scored. These conferences do not require artifacts to be made public. The result of artifact evaluation does not influence the fate of the paper. Over the years, OOPLSA, POPL and PLDI have all embraced this idea with encouraging results.[13]

Promoting Best Practices. Our conferences are widely regarded as excellent publications venues, more competitive that any journal in the field. Program Chairs work extremely hard to make the best use of the reviewing resources available to provide good feedback to authors and select the most promising papers. But too many changes can be confusing to authors. To better control the rate at which the reviewing process changes, and to document our practices, SIGPLAN set out to publish documents for each of the big four. As of now, PLDI has a document titled *Practices of PLDI* and POPL has the *Principles of POPL*[14] Going forward, all changes will also be submitted to the community for comments.

Bias in Reviewing. One measure of inclusiveness is how difficult it is for minorities to publish in a field. The SIGPLAN community, spearheaded by conference chairs and endorsed by the EC, has tried to reduce perceived and actual bias in reviewing with two variants of double-blind reviewing: Double Blind Reviewing,

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[10] An unfortunate side effect of this state of affairs is that our conferences have two entries in the ACM DL, on as a "Proceedings" and another as a "Newsletter".

[11] The print version of Notices is one SIGPLAN largest cost centers as a SIGPLAN print membership is priced below the cost of producing and shipping the newsletter.

[12] The survey was provokingly titled "Who Owns Your Research" to set it apart form a similar survey ACM decided to run in parallel without consulting or notifying SIGPLAN. We had 860 responses, which was a higher response rate than the ACM study and our conclusions showed a stronger proportion of respondent in favor of open access. Data and conclusions are available from `janvitek.org/whoowns.html`.

[13] The AEC web sites are at `www.artifact-eval.org` and `evaluate.inf.usi.ch/artifacts`, and a short article advocating for repeatability appeared in CACM `cacm.acm.org/magazines/2015/3/183593-the-real-software-crisis/fulltext`.

[14] Versions of these documents are available from `www.sigplan.org/sites/default/files/PracticesofPLDI.pdf` and `popl.mpi-sws.org/PrinciplesofPOPL.pdf`.

or DBR, keeps author identities hidden through the entire process while Light Double Blind Reviewing (LDBR) only hides identities until reviewers submit their reviews.[15]

Welcoming New Members. Fostering young researchers and encouraging them to study programming languages is crucial to the long term health of our discipline. While our students have no difficulties finding jobs, few undergraduates have a clear idea of what a career in "programming languages" can be. This leads in relatively low enrollments numbers at the graduate level. This EC supported initiatives to reach more early-stage students and invite them to consider our field. More work is needed, and I can't think of anyone better suited to the task than our incoming chair who started The PL Enthusiast together with Swarat Chaudhuri.[16]

The following inclusiveness initiative were supported by financial grants from SIGPLAN:

- **PLMW**: The Programming Language Mentoring Workshop was created in 2012 by Kathleen Fisher, Ronald Garcia, and Stephanie Weirich as a satellite event of the POPL conference dedicated to introduce newcomers to the field of programming language theory and formal verification, with a particular emphasis on women and under-represented minorities. Since then PLMW was held at every POPL. We also encourage the creation of similar events in our other sub-communities. SPLASH'14 had the first Inspirations Workshop which was billed as a combination whirlwind tour of the research area, networking opportunity, and how-to-succeed guide. This year Kathleen Fisher will run the first instance of PLMW at ICFP in Vancouver. SIGPLAN provided a $20K/year grant to the organizers of these events.

- **OPLSS**: SIGPLAN provided $8K to support the Oregon Programming Language Summer School which aims to give an overview of the landscape in programming language research focusing on foundational work on semantics and type theory.[17]

- **CRA-W**: SIGPLAN provided $7.5K of support to the 2015 CRA-W Grad Cohort Workshop, held in San Francisco. This support allowed 30 women, masters and PhD students, working in programming language related areas, to attend the Workshop.[18]

- **Ally**: SIGPLAN gave $5K to ICFP to organize the Ally Skills Tutorial which "teaches men simple, everyday ways to support women in their workplaces and communities."This tutorial will be tailored to the ICFP community and intended to be useful for those working in academia, in industry, and as open-source volunteers.[19]

I welcome Micheal Hicks, our next chair, and look forward to my role of Past Chair.

Jan Vitek

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[15]PLDI'09, PLDI'10, PLDI'11 and PLDI'15 were DBR. PLDI'12, PLDI'13, PLDI'14, POPLD'12, POPL'14, POPL'15, and OOPSLA'15 were LDBR. Arguments for LDBR were laid out by Hicks (`www.cs.umd.edu/~mwh/dbr-faq.html`), while McKinley is a vocal proponent of DBR (`www.cs.utexas.edu/users/mckinley/notes/blind-revised-2015.html`). As both are on the next EC, look forward to more about this.

[16]The PL Enthusiast, `www.pl-enthusiast.net`, is a blog dedicated to promoting programming language research.

[17]See `https://www.cs.uoregon.edu/research/summerschool/summer15`

[18]See `dev.cra.org/cra-w/events/2015-grad-cohort-workshop`

[19]See `catamorphism.org/Ally2015`