DOI:10.1145/2886093

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Viewpoint

Helping Conference Attendees Better Understand Research Presentations

Sharing lessons learned from a lecture program for making technical material more accessible to conference attendees.

For over 20 years, ACM SIGCOMM has supported activities to make its conferences more accessible to an ever-wider range of attendees, with activities such as travel grants, student events, and mentoring programs. During the mentoring program at ACM SIGCOMM 2014, one of the coauthors of this Viewpoint—Ethan Katz-Bassett—found that students lacked enough background in the topics of many of the research papers, causing them to struggle to understand the presentations or to engage other attendees in conversations. That led us to put together a program of short lectures at ACM SIGCOMM 2015, designed to prepare attendees to better understand the presentations at subsequent technical sessions.

The lectures were extraordinarily successful. We overfilled the lecture rooms and, unfortunately, still had to turn some attendees away. A questionnaire circulated after the conference showed 88% of the lecture attendees felt the previews helped them get more from the technical talks. Although our initial intention was to provide a session to help *students* understand the conference material, to our surprise many attendees were established researchers seeking to understand a new area.

Clearly the lectures met a need. In the remainder of this Viewpoint, we try to characterize that need, explain how we organized the lectures, and discuss insights and lessons learned. The lessons we present are anecdotal—not scientific—but we hope that they spur discussion on how to make technical material more accessible to attendees, a step toward both better communicating advances to the research community and making the community more welcoming. We are in the process of organizing similar lectures for ACM SIGCOMM 2016.

COLLAGE BY ANDRIJ BORYS ASSOCIATES/SHUTTERSTOCK

A Field Keeps Getting Bigger and Broader

The ACM Special Interest Group in Data Communications was estab-

lished in 1969, but it was not until the mid-1980s that it began to host its namesake annual technical conference, ACM SIGCOMM. At the time, the field of data communications was small, and there were less than a handful of conferences. ACM SIGCOMM rapidly became a preferred venue for presenting top research, and, well into the 1990s, an ACM SIGCOMM attendee could expect to hear presentations on at least half the major research results of the year.

Twenty years later, in a data communications field with many more conferences and exponentially more researchers, ACM SIGCOMM continues to seek to present some of the best research of the year in a three-day single-track program. But the intellectual experience for a graduate student has become far more challenging. In the 1980s, a student could read less than 100 papers and have a good sense of the field (an example of this sort of reading collection is Partridge[1]). Now individual papers may require at least some understanding of a dozen or more prior papers, and, in hot topics, the research progress in a year can be substantial. What the students were telling Ethan Katz-Bassett last year was the volume of background material required was too big, and it was inhibiting their ability to fully benefit from the research presentations—and hallway conversations—at the conference.

SIGCOMM has also become a large conference. SIGCOMM 2015 had 608 registrations, of which 171 (28%) were from students. A significant proportion of the students were "junior" graduate students—40% identified themselves as first-year graduate students. In addition, there were five undergraduate students who registered for the conference. These students, graduates and undergraduates, were the target audience for the lecture program.

An interesting thing we learned as we set up the lecture program was that students are not the only ones who could benefit from a background lecture. The quickening pace of research results can affect senior researchers too. As we began circulating information about the program, several senior researchers commented that they too would try to attend too. One commented, "I haven't worked in some areas in a few years, and it would be good to know what's been happening before I listen to the talks." And, indeed, a number of senior researchers attended the lectures.

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How the Lectures Worked

At SIGCOMM 2015, we scheduled two 50-minute lectures, each of which had four 10-minute talks. Each talk covered a topic area in the conference and corresponded to at least one paper session in the conference. The first lecture was held Monday evening, before the conference reception, and the other was held on Wednesday during the lunch break. For the Wednesday session, an industry sponsor provided lunch.

We advertised the sessions by sending an email announcement to all registered attendees, posting to social media (including the SIGCOMM Facebook group), putting up posters at the conference venue, and announcing the Wednesday lecture at the conference's opening session and at the end of the session just before the lecture.

For each topic area, we asked a speaker to provide background information the speaker thought would help the audience appreciate and understand the conference's technical talks on that subfield of networking. We selected as speakers individuals with influential work in the topic area, published within the last few years. There were eight speakers: three industry researchers, one graduate student, and four junior faculty members. Five of the eight speakers were women.

A typical presentation included a brief explanation of the topic (often as one might learn in a graduate networking class) followed by an explanation of the current problems the sub-field was seeking to address, where the conference's papers were seeking to push the field forward, and, where appropriate, how the set of papers interrelated. In addition to setting out the context for the coming technical talks, many of the speakers (unprompted by the organizers) used their presentation to drum up enthusiasm and advertise their topics' talks. Presenters jokingly argued with each other over which areas were more important, interesting, or challenging.

For logistical reasons, we could not use the main lecture hall where the conference presented papers. Rather we were in a substantial classroom that seated approximately 60 people. The room was overwhelmed for both sessions, with people sitting on the floor and standing in the back.

Post Conference Survey

After the SIGCOMM 2015 conference ended, we asked people to respond to a questionnaire about the preview lectures, regardless of whether they had attended. We advertised to all registered attendees and via social media, and we received 59 responses. Of those responding, 20 indicated they had not attended the lectures. The comments revealed that at least some of these 20 were faculty members who were summarizing their students' experiences and also some attendees who had been unable to attend the previews, but had made use of the slides (which we placed online). Of those who attended, just under half (47%) attended both sets of preview lectures.

Everyone polled said they would recommend that students attend the preview lectures in the future and all but one person said we should offer the program at ACM SIGCOMM 2016. When asked whether the talks helped attendees get more out of the technical talks, 39% of those surveyed said the preview lectures were very useful, 37% said somewhat useful, 10% said only a

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little useful, and the remainder were unsure. Interestingly, similar percentages felt that the preview lectures also helped attendees talk with other attendees about research interests.

We asked whether we should change the format to individual lectures, or one long session of preview lectures. Attendees strongly (71%) preferred the format we (rather accidentally) had used of a set of four lectures previewing the upcoming sessions. They overwhelmingly (94%) endorsed keeping each preview lecture short (10-minute talks) and generally (92%) felt that the short talks had provided the right level of background for the next day's talks and (89%) clearly explained the motivation for the research that the talks would present.

Less clear was whether the preview lectures got the balance right in terms of how much detail about the papers was in the preview lecture vs. leaving the details to actual authors' presentations the next day. A majority felt the balance was about right (68.6%), but significant minorities wanted more (22.9%) or less (8.6%) details of the upcoming papers.

Other Lessons Learned

We learned some things, largely accidentally, while putting on the lecture program. For some students, the lectures turned out to be their first exposure to some subfields of data communications. Some of the speakers picked up on this vibe and advertising that their subfield was "cooler" became a running jest across the lectures. Yet the impact was also real. Two students commented to coauthor Justine Sherry that her presentation had led them to consider doing thesis work in her topic area. Several female students observed that the majority of the speakers were women and commented that it helps them build up confidence.

Ways We Can Improve

The most obvious way we can improve is to provide more space, so that all interested attendees can hear the lectures. While there have been suggestions to put the individual lectures on video, the unexpected benefits of clustering the talks have led us to seek to continue with the in-person multi-lecture format for SIGCOMM 2016. We also clearly have an issue engaging the audience to ask questions. The speakers received almost no questions during the lectures, despite inviting questions. Yet the post-conference questionnaire showed that 40% of attendees felt there was not enough time for questions. It would appear that something about the format unintentionally suppressed questions. We need to find ways to make it easier to ask questions. C

Reference

1. Partridge, C., Ed. *Innovations in Internetworking.* Artech House, Inc., Norwood, MA, 1988.

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The authors thank the individual lecturers (Justine Sherry, Laurent Vanbever, Aaron Schulman, George Porter, Te-Yuan (TY) Huang, Maria Kazandjieva, Nandita Dukkipati, Phillipa Gill) for making the program a success. We also owe a tremendous debt to the ACM SIGCOMM 2015 local arrangements team (especially Hamed Haddadi) for dealing with logistics. Finally, a thank you to Netflix for catering the lunchtime lecture session.