The Value of Conferences

"Why go to conferences? With access to databases such as IEEE *Xplore*, there's no need to attend a CDC or CCA or ACC to read the latest paper; everything ends up on the web, sooner or later, usually pretty soon." This is the way an interesting editorial written by Dennis Bernstein, the magazine's editor-in-chief in 2007, began [1]. Eight years later, I find this question still very meaningful, and I would like to give my own answer.

I see several reasons why attending a conference may be extremely beneficial, providing advantages and opportunities that you would never be able to have by staying in your office and surfing the web in search of technical information!

RESEARCH

Yes, research is obviously the first motivation. It is true, results eventually get published and oftentimes (almost always, nowadays) are available online. But by attending a conference you have the possibility of being exposed to new results and new research directions much earlier than you would be by waiting for them to appear online. Plus, the amount of information you may be able to gather by attending a three- or four-day conference is quite significant. Listening to a 20-min talk is a much more efficient way to quickly understand a paper's content compared to reading it. Clearly, you may not necessarily grasp all the finer mathematical details, but if the speaker is good, you get a clear picture of the main ideas underlying the results, and these ideas often prove to be more useful to your research than the specific details. Also, occasionally you end up listening to talks whose titles may not have attracted your attention, and hence you would have probably ignored them when looking at the proceedings table of content, but they turn out to be extremely interesting and helpful for your research.

Finally, let us be honest: we are always in a hurry, like busy bees, and our bibliographic searches are always very focused. We seldom have the time to look at journal contents just for the sake of it. Conferences offer a precious opportunity to get updated quickly about current trends in our research areas.

NETWORKING

When you go to a conference like the CDC, you typically mingle with approximately 1500 of the best researchers in your own field. This is an amazing opportunity to get to know people who work on subjects close to yours, to exchange information that may turn out to be valuable for your research, and to start new collaborations. For Ph.D. students and postdocs, it may even be the opportunity to find a new position or an institution to visit for collaborative research. A good number of research collaborations start at conferences; a casual conversation at a coffee break may lead to joint research investigation and subsequent publications. Conferences offer the opportunity to coauthors, who may be geographically separated, to meet in person and work together (possibly over a nice beer), a lively and enriching experience that even the most successful Skype call cannot match.

A LONG-TERM INVESTMENT IN OUR RESEARCH COMMUNITY'S FUTURE

For students who are new to the field and to the research environment, conferences offer an incomparable opportunity. Students can learn how to give an engaging technical presentation, how to create their own networks (which may end up being fundamental to their research activity and career), how to choose the research topics, and, in general, how to move in this rich and diverse community where people with different interests and backgrounds mix. The tradition of doing research and networking must be passed to the next generation, and there is no better lab than conferences in which to train the young researchers!

Then, of course, there is the *fun* part. After a few years of attending a conference, you get to know a lot of people, and it also becomes an opportunity to meet friends and spend time together. Dennis said that this was initially making him feel guilty [1]. I must be bad: I never felt guilty! I believe that the social aspects involved in attending a conference have very significant outcomes: they stimulate people to create new collaborations, and they help in developing a sense of belonging, which oftentimes leads many of us to serve as volunteers. After all, our Society is run by volunteers, our journals are run by volunteers, and our conferences are run by volunteers. The only reward for people who are willing to devote their time to these activities is

personal satisfaction and the pleasure of interacting with colleagues who, over time, become friends. I think that all these outcomes are very meaningful. So, even the fun part is important.

But since I am talking about conferences, there is another question I would like to address: is it still worthwhile to submit a paper to a conference? Some people have expressed some doubts about this, with the main concern being that by publishing results in a conference paper, one cannot publish exactly the same results in a journal. Is this a legitimate concern? I have already expressed my thoughts on this issue in a previous column [2]. I would like to take a different perspective.

First of all, if one of our papers is submitted to an IEEE Control Systems Society (CSS)-sponsored conference and appears on IEEE *Xplore*, it is not as if it has been hidden in some obscure place where nobody will be able to retrieve it: it has been published, and it is readily accessible! A conference paper available on IEEE *Xplore* has the same visibility and the same possibility of being retrieved when a person makes a bibliographic search as any journal paper appearing in IEEE *Xplore* and a much higher one than papers available in other repositories.

Conference publications have a fast time line, and by publishing our results immediately we have the opportunity of staking a claim on the underlying ideas. Also, in this way, the dissemination of our results will be faster, and they will start having an impact earlier.

Finally, even if it is true that, due to page restrictions, sometimes conference papers are concise and may challenge reviewers and readers due to lack of detail, most of the time I find the reviewers' comments to my conference papers very constructive, insightful, and interesting, and they help me in preparing an extended journal version, in case I have an interest in doing so, which is not always the case.

It is true that oftentimes some of our academic colleagues find that, for their tenure and promotion, conference papers count for very little and occasionally do not count at all. Therefore, they are reluctant to publish in a conference, knowing that they will have to "significantly" expand the paper for it to be considered for a journal while they believe that the conference paper itself is quite complete and worthy of consideration. Then we have our colleagues from industry who simply do not have the resources (mainly the time needed) to expand a conference paper to submit to a journal and would much rather see their conference version itself appear in a journal. Wouldn't it be great if we could address these concerns and continue to make attending the conference a worthwhile experience?

I would like to mention a very interesting initiative of the IEEE Robotics and Automation Society (RAS) that has recently been approved by the IEEE Periodicals Committee. This initiative addresses the issues raised here and other related concerns, for instance, the need for a rapid review process and the desire not to overload the community with review requests by having two papers with a common core reviewed by two different panels of reviewers. A new journal called *IEEE Robotics and Automation Letters* (*RA-L*) has recently passed the final evaluation phase and will be launched in January 2016. The journal model is that of rapid publications. Papers are submitted to the journal, and, if the authors are interested in it, they can also propose the paper for presentation at RAS's flagship conference, the International Conference on Robotics and Automation (ICRA).

The peer review process is managed by the *RA-L* Editorial Board. If the paper is also submitted to ICRA for presentation, the reviews and associate editor evaluation are transferred to the ICRA Program Committee, which makes a decision based on these documents. I omit the details of this innovative and very well-articulated proposal [3], but it is my opinion that a similar initiative for the CSS community would be worth a discussion.

REFERENCES
[1] D. Bernstein, "Guilt free," *IEEE Control Syst. Mag.,* vol. 27, no. 5, pp. 6–7, Oct. 2007.
[2] M. E. Valcher, "Ethics in publishing and the re-use of previously published material," *IEEE Control Syst. Mag.,* vol. 35, no. 2, pp. 12–15, 2015.
[3] (2015, June 29). [Online]. Available: http://www.ieee-ras.org/publications/ra-l

Maria Elena Valcher

We Want to Hear From You!

Do you like what your reading?

Let us know—send an email to the Editor-in-Chief.

Letters may be published in future issues and edited for style.