

# **SIGARCH/TCCA's Recommended Best Practices for ISCA Program Chairs**

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These are a set of best practices recommended for ISCA Program Committee (PC) chairs. They do not overlap with existing ACM/IEEE policies (e.g., such as those on plagiarism or confidentiality). Instead, they are provided as guidance to future PC chairs as they face committee selection, the reviewing process, and the running of the PC meeting. PC chairs are encouraged to try new ideas in future conferences in order to continue to improve ISCA. Process changes that significantly deviate from these recommendations are expected to be discussed with the ISCA Steering Committee, and their outcome will inform future revisions of this document.

## **1. Size and Composition of the Program Committee**

The recommendation in both size and composition of the PC is to trust the technical acumen of the PC chair. He/she is a leader in our community and has already proven his/her fine technical judgment. To select the PC, the PC chair's top priorities should be to include the highest-quality people and to cover as many active research areas as possible. It is also highly encouraged that the PC is representative of the community and that it includes diversity. In addition, the PC chair should keep in mind that recent years have seen a steady increase in the number of paper submissions (over 280 in ISCA-2013); as a result, recent PCs have had 38-50 members. The PC chair should carefully balance the goals of keeping PC member reviewing load at acceptable levels, and maximizing the number of PC members that can speak authoritatively about a given submission.

The PC chair is not required to run the potential PC by the Steering Committee for approval. However, it is desirable that he/she seek advice in the process of selection. The Steering Committee does not have the power to veto any person selected by the PC chair.

## **2. The Reviewing Process**

The reviewing process should be double blind. The authors do not know who the reviewers are, and the reviewers do not know who the authors are – at least until the PC meeting when, in front of everyone, the names may be disclosed. In addition, conflicts should be taken seriously. A conflict occurs in the following cases (the PC chair has the discretion of being stricter than this):

- Between advisor and advisee forever.
- Between family members forever.
- Between people who have collaborated in the last 5 years. This collaboration can consist of a joint research or development project, a joint paper, or when there is direct funding from the potential reviewer (as opposed to company funding) to an author of the paper. Co-participation in professional activities, such as tutorials or studies, is not cause for conflict. When in doubt, the author should check with the PC chair.
- Between people from same institution or who were in the same institution in the last 5 years.
- Between people whose relationship prevents the reviewer from being objective in his/her assessment.

When a PC member has a conflict with a paper, no information about the paper should be made available to him/her. Authors and reviewers should declare their conflicts. Authors should not use this ability to blacklist reviewers who are not conflicted according to the rules above. Hence, we recommend that authors be required to list the reason for each conflict with potential reviewers, and that PC members be allowed to see this information.

Reviewer assignment is one of the key tasks of the PC chair. It is his/her ultimate responsibility (and one that should directly impact his/her reputation in the community) to ensure a fair assignment of reviewers to papers.

The PC chair should assign all the PC reviewers, except for papers in which he/she has a conflict. In assigning reviewers to a paper, the PC chair should be careful to include a set of people who, while being experts in the topic,

do not hold a “one-sided” view of the particular area; as a whole, they should represent the various views of the whole community. Papers for which the PC chair has a conflict should be handled by another PC member, who should select the reviewers, handle the reviews, and moderate the paper discussion at the PC meeting.

For the non-PC (i.e., external or secondary) reviewers, we recommend that the PC chair also assigns them. The PC chair can make use of an External Review Committee to facilitate non-PC assignments. This will generally ensure a high quality of reviewers – as well as reduce the load on the PC members. It is also acceptable that the PC chair requests that PC members assign secondary reviewers. With this approach, one may reach a broader network of reviewers. In this case, however, a PC member cannot process the same submission as primary and secondary paper. Besides, the PC member should be encouraged to seek the best reviewer, going outside his/her institution if necessary. In this case, the PC member should first check with the PC chair for conflicts.

The PC chair is responsible for generating, for the large majority of submissions, at least 5 good-quality reviews that PC members can present and defend in the PC meeting. At least 3 of these should be PC reviews. The PC chair can choose between a single-round and a two-round review process. In the latter case, for a paper to receive only first-round reviews, it should have at least 2 PC reviews, at least 3 total reviews, and no review in the accept range.

After all of the reviews are finalized, they should be made available for the authors to respond to. The rebuttal period should be at least 4 days. The PC chair should communicate the days in advance, so that authors can plan accordingly. After that, papers should be graded or re-scored. For this step, a reviewer should be able to see, for the paper he/she is grading, the rebuttal, all of the reviews, and the identity of the reviewers. This grade or final score is the main parameter that should be used for classifying/ranking papers for discussion in the PC meeting.

During the grading period, the PC chair should strongly encourage email discussion between divergent reviewers of a paper. The goal is to reach consensus on the paper before the PC meeting, which will save time at the meeting.

We recommend that the PC chair also asks the external reviewers of a paper to read the rebuttal and the reviews, grade/re-score the paper, and participate in the pre-PC meeting email discussions. If the PC chair chooses to do so, he/she should ensure that all the papers have the benefit of thoughtful feedback and grading/re-scoring from every reviewer.

The final fate of a paper is decided during the PC meeting. During this process, only PC members have a vote. PC members must take into account the input of the externals when they cast their vote.

A reviewer (PC member or external) is assigned a paper in confidence. He/she is required to review the paper by him/herself, not pass the paper or its contents to anyone else, and destroy the paper after the reviewing process is over. In certain circumstances, such as when the reviewer feels that someone else is more expert, he/she may ask the PC chair for permission to share the paper with another individual. The reviewer still has to enter the review. In general, in the process of reviewing the paper, a reviewer may ask questions to a colleague to understand the contribution better, without passing the paper or revealing the full details of the paper.

For transparency, the PC chair must make all the papers, their reviews and rebuttals, and the identity of their reviewers available to all of the non-conflicted PC members before the start of the PC meeting. The identity of the authors themselves should only be made public at the point of the discussion of the paper.

### **3. Running the PC Meeting**

The time available for the PC meeting is short for the task at hand. Hence, the PC chair should carefully plan how to run the meeting in the most productive manner. The structure of the meeting should be shared with the PC beforehand, so that little time is spent during the meeting describing it.

The PC chair should establish a cutoff criterion for what papers will be discussed during the meeting, and share this information with the PC in advance. Reducing the workload in the meeting is necessary in order to allow enough

time for the discussion of papers that have a chance of being accepted. The PC chair must allow any PC member to rescue any paper that is below the cutoff line and bring it to discussion.

The PC chair should strive to foster a positive attitude in the discussions, and err on the side of accepting as many good papers as possible. The PC chair should also remind the PC to not be concerned about the number of papers accepted thus far, as focusing on this can cause bias in papers that are scheduled to be discussed later in the meeting.

There are many ways of ordering the papers for discussion. It is helpful to start the meeting by discussing top ranked papers, since it helps calibrate the PC and sets a positive tone from the start. It is critical to adhere to a strict maximum time for discussion for each paper, particularly early in the meeting when there is less time pressure.

At the time a paper comes up for discussion, the conflicted PC members (potentially including the PC chair) are first asked to leave the room. Only when they all have left the room can the paper number, title, and authors be revealed. The PC chair can minimize time wasted in asking PC members in and out of the room by making small adjustments to the order of discussion.

Each paper to be discussed must have a pre-assigned discussion lead among the PC members who read the paper. The lead should be the PC reviewer who is the most positive toward the paper. The discussion starts with the lead, who summarizes the paper and presents his/her opinion. The external reviewers' position should be explicitly presented by one of the PC reviewers.

The outcome of each paper should be primarily decided by a vote among the PC members who reviewed the paper, preferably by simple majority. Other PC members are encouraged to opine and ask questions before the vote. If the vote is inconclusive, a PC-wide vote decides the outcome. If that ends in a tie, the PC chair makes the call.

The PC chair should be wary of statements that dismiss a paper solely on the basis of not fitting the conference. A rule to apply when deciding whether a paper is appropriate is to ask whether: (1) the conference attendees would appreciate the paper and (2) our reviewers could judge the paper's merits. Similarly, no quotas should be set for areas or segments of the community. Both quality of the ideas and thoroughness of the evaluation should be taken into account. Papers with a higher degree of novelty should be valued by the committee even when their quantitative evaluation is not as thorough as in a paper in a more established area.

The General and PC chairs cannot submit papers. A PC member can submit any number of papers, but no more than two papers can be accepted. Other than that, PC papers are evaluated with same standards as non-PC ones.

If at all possible, a paper's outcome should be decided when the paper is first brought up for discussion. The PC chair should try to avoid tabling a paper or creating a maybe-accept list. The reason is that, by the time the committee returns to consider these papers, it is often late in the day, some members have already left, and the ones remaining struggle to recall the particulars of the papers in question.

It is acceptable to assign PC members as shepherds to papers that are deemed to require certain fixes in order to be accepted. The shepherd has authority to recommend rejection of a paper when the authors fail to make the required changes. A shepherd makes his/her recommendation to the PC chair, who decides on the final fate of the paper.

During the PC meeting, the accept/reject outcome of a paper is not made available to the conflicted PC members. Only after the PC meeting is over can this information be made available. After the PC meeting, PC members must keep the outcome of the papers confidential until the PC chair tells them otherwise.

#### **4. Other Issues**

All papers, reviews, and rebuttals provided to the PC members, and discussions before and during the PC meeting are confidential. After the meeting, PC members must destroy any record (electronic or otherwise) of such information, and not disclose (or use) it in any way. The same applies to external reviewers.

PC members are required to attend the PC meeting in a way that allows them to be fully engaged in the discussions. Such requirement and the date of the PC meeting should be communicated to the PC members at the point of the invitation. Traditionally, this has been accomplished by requiring all PC members to be physically present. Teleconferencing technology that achieves the same goals without requiring traveling is equally acceptable.