

ICSE 2014 – Program Committee Guidelines

Thank you again for agreeing to serve on the ICSE 2014 Program Committee (PC). The work of the PC involves two different phases: review period and online discussion. The CyberChair section below provides a summary of the functionalities offered to support your tasks during each of these two phases.

Based on a bidding process, you will be assigned a set of papers for which you will serve as a reviewer. As a PC member you play a very important role in ensuring the quality of the conference. We thus ask you to provide thoughtful, constructive, and honest reviews, on time. We also ask that you fully participate in the online discussions.

The overall review process has undergone two significant changes as compared to previous years:

- *Program board.* A program board will assist the PC co-chairs in shepherding the review process, reaching a suggested consensus decision for each paper via an online discussion with the reviewers, and making the final decisions regarding accepting or rejecting each paper during a program board meeting.
- *Categories of papers.* All authors have been asked to label their paper with one or more standard categories, each category delineating a particular type of paper (analytical, empirical, technological, methodological, perspective; the full descriptions of the categories are included below). These categories help in understanding the contribution of the paper to be reviewed, as well as the expectations on how this contribution should have been evaluated.

As in previous years, we will be following a two-stage review process, with some papers being rejected after the first round of reviews. You can thus expect two batches of reviews, with the first batch somewhat larger and the second batch somewhat smaller.

Phase I: review period

- We will filter out papers that are out of scope and/or non-compliant with the submission guidelines before commencing in the paper assignments process. We will also work hard to ensure we do not give you conflicting papers. However, we may make a mistake. As soon as you receive your reviewer assignment, please:
 - *Verify that you have no conflict of interest with any of the authors.* Let us know immediately if you do; do not review the paper.
 - *Check the size and formatting of the submission.* If the page number exceeds the maximum number of pages permitted (10 pages of text plus up to 2 additional pages of references) or if the formatting clearly is not compliant, please let us know immediately. Do not review the paper.
- It is essential that you provide high quality reviews to enable rational decisions to be made about accepting or rejecting a paper. Hence, please read each paper carefully (ideally, early in the review period) and provide a thoughtful, constructive, and honest review for each paper. The more detail you provide regarding your opinions on the paper, the better the review process will be able to commence, and the better the author will be able to improve their paper, whether accepted or rejected.
- PB members will be overseeing the review process and read your reviews when you submit them. If they feel something is missing, or have questions about a review, they will be in touch to ask you to submit a revised version of the review by the review deadline.

Phase II: online discussion

- PB members will initiate and moderate online discussion for each of the papers that remain viable candidates for acceptance after both rounds of review. Please actively participate in all of the online discussions regarding the papers that you reviewed, and please be timely in your responses. Only you, the other PC members assigned to the paper, and the PB member will be able to contribute to this discussion (indeed, none of the other PB or PC members will be able to view the discussion at this time).
- Please keep in mind:
 - Focus on reasons to accept papers. Try to steer the discussion in a positive direction.
 - Remember that ICSE 2014 is not a journal, and so the priority is to publish timely, worthwhile contributions. Demanding perfection within the time and space limits of a conference is not reasonable.
 - Make sure to take into account the selected paper categories when discussing a paper.
 - Avoid discussions to become personal or drift away from rational arguments.
- The goal of the online discussion is to obtain consensus among the PC reviewers as to whether the paper is suggested to be accepted or suggested to be rejected. Reaching consensus, however, is in no way compulsory. A perfectly viable outcome for the discussion is 'still undecided', in which case the PB member will bring the arguments to the PB meeting, where the paper and its reviews will be calibrated in the overall set of papers and reviews, and a final decision will be made.
- As part of the online discussion, it is natural that you or other reviewers may change your reviews and recommendations. Please update your reviews accordingly.
- The PB member will, for each paper, add a summary of the discussion using CyberChair. This summary, together with the detailed reviews, will serve as the basis for discussion of the paper at the PB meeting. The summary will focus on the primary reasons why a paper is suggested to be accepted, suggested to be rejected, or still undecided (provide the 'key argument').
- Some of the papers will hereafter be rejected; for those papers, the summary will also serve to inform the authors of the nature of the discussion and the key arguments for rejection at this time.

Reviewer conduct

Your review not only go to the authors of the paper, but it will also serve as the basis for the online discussions with the other PC members and the eventual decisions made by the Program Board. For those new to the review process, we recommend the guidelines suggested in the paper by Alan Jay Smith, "The Task of the Referee", IEEE Computer, 23(4), pp.65–71. April 1990.

Here are some points that we ask you to please heed.

1. *Submit your review in time.* Our timeline is tight and depends on all of the reviews to be completed on time. If you cannot complete a review by the deadline due to unexpected issues, please let the PC co-chairs know as soon as possible.
2. *Be positive.* The main job of the program committee is to *accept* papers. As you know, a perfect paper does not exist! We should accept high-quality papers, even if there are a few minor problems or if we ourselves might have taken a different approach to the work. Under no circumstances do we expect you to weaken the high standards to which ICSE has traditionally held its accepted papers, but do remember that ICSE is a conference and not a journal. Missing or incorrect details can often be corrected in time for

the camera-ready deadline. So, if the paper is interesting, if you learned something while reading it, if you would recommend it to others, if it would generate a good debate – these are good reasons to accept the paper.

3. *Ensure review quality*. You are personally responsible for the quality of reviews for the papers that are assigned to you. It is allowed to ask a sub-reviewer in cases where you would like to obtain additional feedback or expertise (in which case, please make sure to stress confidentiality of the process to the sub-reviewer). However, you yourself also must read, judge, and review the paper, and you are responsible to ensure timely submission of a review that is factual, fair, and professional. Furthermore, we expect you to personally participate in the online discussion.
4. *Ensure professional reviews*. Above all, we expect ICSE reviewers to act professionally.
 - a. *Respect*: Reviewers should respect the time and effort spent by authors writing their papers. Please refrain from using language that is demeaning and please ensure that your criticisms are constructive and clearly related to the paper's content.
 - b. *Discussions*: The online discussions must be equally respectful of the authors, as well as the other reviewers. There will very likely be reviewers that have opposing views about the significance of some papers. You are strongly encouraged to discuss these differences, but this must be done on professional terms.
5. *Confidentiality*. All submissions are to be treated confidentially, so copies of the submissions cannot be shared with anybody else and you should destroy the papers after the whole peer review process is over. Moreover, you should not disclose any details of the review process (e.g., other reviewers, grades, discussions) to any outsider. This means as well that you should not refer to other ICSE 2014 submissions that you are reviewing in your reviews or during the online discussion.
6. *Double submission and plagiarism*. If you suspect a paper of being under submission to another conference or journal, or if you suspect a paper constitutes plagiarism, immediately warn the PB member overseeing the paper as well as the PC co-chairs as soon as possible. Do not wait until the review deadline.
7. *PC co-chairs conflict of interest*. Although the general chair and PC co-chairs are not allowed to submit papers, there may be some papers for which one of us may have a conflict of interest. In such cases, each of us will work as a substitute of the other to maintain confidentiality of the reviews.

CyberChair

Your papers are accessible through your CyberChair's reviewer page. When logging in you will see the list of papers for which you are a reviewer. Here's a summary of the functionalities after logging in:

- *Bidding*: as usual. You will receive separate instructions when it is time to bid.
- *Review period*: you will receive a copy via e-mail of each review that concerns one of the papers that you have been assigned. Please read these carefully. You can also see the reviews online by clicking on a paper number. The list of reviews that have already been completed will show up on the left.
- *Online discussion*: use the 'online discussion' link (visible on the left after you have clicked on a paper number) to participate in conversations initiated by the PB member responsible for each of the papers. Please stick to using CyberChair, rather than using e-mail, so a record is kept of the arguments back and forth.
- *Decision summary*: CyberChair is currently being extended with additional functionality through which the PB member will insert a discussion summary, first as based on the

online discussion and later as adjusted based on arguments at the PB meeting. You will be able to see the summary and comment, through the online discussion link, on it as need be.

Review form specifics

Classification. The review process is helped most when your letter grades match your actual perception of the paper. If you believe a paper is a C, please do not mark it a B because you think someone else should review it. Use the discussion with the PB instead; PB members can rescue a paper for further review in the second round by a third PC member. Also, do not hesitate to give papers A's and D's; the lack of A's at a typical ICSE PC meeting is quite disconcerting; surely there are papers that you believe should definitely be accepted. Mark them as such.

Committee comments. This is where you express additional concerns that you do not wish to share with the author, but that might be pertinent to other reviewers, the PB member overseeing the discussion, or the PC co-chairs.

Summary. This is an important section, because it shows the author that the reviewer understood the essence of the paper. Having this summary also helps during the online discussion and subsequent PB meeting. This section forces you to think about the contribution of the paper (that we suggest to be part of this summary).

Evaluation. Please start your review by listing and discussing the **strengths** and **weaknesses** of the paper, as this is the most critical information for both the review process and the authors. After that, please include detailed comments substantiating your assessment of the paper's strengths and weaknesses, as well as specific suggestions for improvement (particularly with respect to the weaknesses you identified). This approach will make criticisms more palatable to the authors, who are after all our colleagues. We want them to be successful in their endeavors, and the review process is one way in which we can explicitly do so. Having said this, the time you spend on a review should be commensurate with the quality of the paper.

Please consider the following evaluation criteria while writing the evaluation section of your review (Recall, however, that **the emphasis placed on them depends on the category of the paper**, descriptions of which are included below).

- **Significance of primary contribution:** Please comment on the significance of the contribution within the broader body of literature as it exists today. To what degree does the paper contribute new knowledge to our field, whether that knowledge is in the form of a new tool, study, methodology, technique, etc.?
- **Novelty and originality of contribution:** Note that novelty is not limited to a new technique, method, or language. Novelty can also arise when existing techniques, methods, or languages are used in ways that were not considered in previously published work, or in offering new empirical evidence that did not exist today.
 - Please check, to the extent possible, that the work has not been published elsewhere.
 - If you have evidence that a paper is under review at another venue please include appropriate information on this in your review and inform the PB member overseeing the review as well as the PC co-chairs.
 - Please comment on the appropriateness of related work described in the paper, as well as the references provides.
- **Validity of contribution:** Please comment on the quality of the authors' validation of the claimed benefits of the primary contribution. Please state whether or not you are con-

vinced by the validation, and why.

We request, once more, you to take the paper category (or categories) into consideration when evaluating the paper. Note that authors sometimes wrongly categorize their papers on submission, or you may disagree where the primary contribution of a paper lies. If this situation were to arise, we ask that you review the submission per the criteria of the category or categories where the paper best fits. If you do so, please mention this in your review and during the online discussion.

Finally, it is very important that accepted papers are well written. Please include comments on the clarity of the writing, the appropriateness of the diagrams, and the overall organization of the paper and topics.

Paper categories

It is very important that your reviews take into account the category or categories to which each paper belongs.

- *Analytical*: A paper in which the main contribution relies on new algorithms or mathematical theory. Examples include new bug prediction techniques, model transformations, algorithms for dynamic and static analysis, and reliability analysis. Such a contribution must be evaluated with a convincing analysis of the algorithmic details, whether through a proof, complexity analysis, or run-time analysis, among others and depending on the objectives.
- *Empirical*: A paper in which the main contribution is the empirical study of a software engineering technology or phenomenon. This includes controlled experiments, case studies, and surveys of professionals reporting qualitative or quantitative data and analysis results. Such a contribution will be judged on its study design, appropriateness and correctness of its analysis, and threats to validity. Replications are welcome.
- *Technological*: A paper in which the main contribution is of a technical nature. This includes novel tools, modeling languages, infrastructures, and other technologies. Such a contribution does not necessarily need to be evaluated with humans. However, clear arguments, backed up by evidence as appropriate, must show how and why the technology is beneficial, whether it is in automating or supporting some user task, refining our modeling capabilities, improving some key system property, etc.
- *Methodological*: A paper in which the main contribution is a coherent system of broad principles and practices to interpret or solve a problem. This includes novel requirements elicitation methods, process models, design methods, development approaches, programming paradigms, and other methodologies. The authors should provide convincing arguments, with commensurate experiences, why a new method is needed and what the benefits of the proposed method are.
- *Perspectives*: A paper in which the main contribution is a novel perspective on the field as a whole, or part thereof. This includes assessments of the current state of the art and achievements, systematic literature reviews, framing of an important problem, forward-looking thought pieces, connections to other disciplines, and historical perspectives. Such a contribution must, in a highly convincing manner, clearly articulate the vision, novelty, and potential impact.

Timeline

The dates that are particularly relevant to the PC members are highlighted in bold.

September 16-19, 2013	Bidding
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September 27, 2013	First round assignments distributed
September 27- November 1, 2013	First round of reviews
November 7, 2013	Second round assignments distributed
November 7-22, 2013	Second round of reviews
November 28-December 20, 2013	Online discussion
January 9-10, 2014	Program Board meeting
January 17, 2014	Author notifications

For questions or further comments

Many thanks for all the hard work and time you are willing to dedicate to ICSE 2014. If you have any further comments or questions, please do not hesitate to contact us.

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