

Reviewing Papers for Conference Presentation

Peter Smith
Professor Emeritus of Mathematics
Saint Mary's College
Notre Dame, IN 46556
574-289-2126
psmith@saintmarys.edu

Abstract

ASCUE is currently reviewing a proposal to create a refereed paper track at the annual conference. This paper will discuss this proposal and suggest criteria for reviewing papers and a process for accomplishing this review. It will examine the processes used by similar conferences and make recommendations for consideration at the annual business meeting. The paper will include a discussion of the process used to prepare papers for the ASCUE conference proceedings.

History and Philosophy of Peer Review

Peer review of academic papers was first used at the [The Royal Society](#) in England in 1665 by Henry Oldenburg, who was the editor of [Philosophical Transactions of the Royal Society](#). It was and still is intended to assess the quality of an author's work and to find errors in his or her findings. Also termed "refereeing," peer review uses scholars in the author's field to read and critique this work. Traditionally the reviews have been "blind" in that neither the reviewers nor the author know the identity of any of the others. The reviewers typically fill out an evaluation form noting problems and suggesting improvements. Each reviewer is asked to recommend or not the paper for publication. The reviewer comments are usually sent to the author (but not the recommendation).

Recently, a more open process is being tried, where the names of the reviewers are published along with the paper being reviewed. This allows the reviewers to take credit, motivates closer communication between the author and reviewer, and minimizes referee bias. The results of this experiment have been mixed. Most scholars have declined to act as reviewers when asked to use this open process. Authors were similarly reluctant to submit their papers to the process. Change is difficult. Only time will tell if open reviewing has a future.

Another motivation for submitting a paper for review is that colleges and universities often will not pay the expenses of a faculty member to attend a conference if that teacher has not submitted a refereed paper.

Current ASCUE Process

Currently, authors submit abstracts electronically to the website in early January, and these are reviewed and either accepted or rejected by the program chair. The primary criterion is how well the proposed paper corresponds to the conference theme. If an author submits two or more proposals and the number of submissions exceeds the time and space available, it is possible that only one abstract per author will be accepted. Often the program chair will ask authors with mul-

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multiple submissions if they will be willing to present an additional paper if another presenter cancels.

The author whose abstract(s) have been accepted has until late April to submit the finished paper to the publicity director who is charged with preparing the proceedings. The submitted papers are examined and formatted to fit the proceedings design – currently, Times New Roman 12 point font, one inch margins all around, and footnotes, but no end notes. The publicity director divides the papers into two categories: experiential and theoretical. Often, theoretical papers will discuss a broader concept and cite a number of references to substantiate their claims, while experiential papers describe an experience specific to an institution and describe the context and consequences of the experience. The theoretical papers appear first in the proceedings in alphabetical order by first author name, followed by the experiential papers also alphabetically by author.

Proposed Process for Reviewing ASCUE Papers

Those authors who wish their papers reviewed should indicate this preference when submitting abstracts. Up to fourteen papers will be selected by the program chair for review by an ad hoc committee consisting of members of ASCUE with faculty status. This committee will be selected by the Board of Directors at its fall meeting each year. Each paper will be reviewed and scored by three readers using a process determined by the Board at its fall 2008 meeting. Some sample referee processes will be examined later in the paper. The review committee will strive to achieve a 50% selection rate and the selected papers will be placed in a special section of the proceedings, scheduled for presentation in a special track at the conference, and possibly published in an ASCUE journal.

In order for the review committee to have time to read the papers and decide which should be accepted, authors wishing to have their papers refereed will have to submit them by April 1. If a paper is not selected for the refereed track it will still be scheduled to be presented as a regular paper unless the author declines. Successfully refereed papers will be so indicated in the conference schedule booklet.

Models for Reviewing Papers

There are two models for paper review covered in this paper. The first has been adopted by the Academy of Process Educators for its International Journal of Process Education (IJPE), and is intended to mentor all authors who present papers so they can improve the paper and eventually win journal acceptance. The second is used by the ACM Special Interest Group on Computer Science Education (SIGCSE). This process is much more stringent and accepts only 10% of the papers presented. While the author has access to reviewer comments, he or she is allowed to make only minor modifications and only if the paper has been selected for presentation at the annual SIGCSE meeting as a result of the review process.

IPJE Model

The Academy of Process Educators sponsors a conference and a journal. Papers and workshops intended for the conference are not reviewed except for suggestions for improvement from the program chair, and are published in a proceedings. As such, this organization is much like AS-

CUE as far as the conference goes. However, papers can also go through a review process and be published in the IJPE. ASCUE is investigating taking over a defunct journal in which successfully reviewed papers can be published. There will be more discussion of this option at the business meeting at the 2008 conference.

Appendix 1 contains a copy of the review document for IJPE. The SII format mentioned for reviewer comments stands for Strengths (S), Areas for Improvement (I), and Insights gained from reading the paper (I). The scoring is done on the basis of ten criteria with each criteria given a score from 1 to 10 (1-2 poor, 3-4 below average, 5-6 average, 7-8 good, and 9-10 excellent). To be accepted a paper needs a total of 60 or better. Papers which fail to meet this standard may be modified using the reviewer comments and resubmitted for the current issue of the journal. Papers with scores less than 40 will probably not be successful even with major rewriting. The authors of these papers are encouraged to completely rewrite the paper and submit it for a subsequent issue repeating the complete review process.

There will be at least 3 reviewers in a double blind process. Authors should submit two copies of their paper, one to be published and one with all identifying data stripped out. The complete peer review process takes three months. The reviewers will not be identified, but their comments in the form of SII assessment will be made available to the author of the paper being reviewed. The journal editor or her appointee will mentor authors whose papers receive a score of 40 or above from all three reviewers.

The following paragraphs are taken from the IJPE guide for reviewers:

“Articles are expected to report an original contribution on a significant research topic related to process education as outlined in the aim and scope of the journal.”

“Submitted manuscripts must include the following elements:

- Manuscript title
- Authors’ name and affiliations
- 100-150 word abstract
- Introduction section following the abstract and preceding the main body of the manuscript
- The main body of the manuscript, divided into appropriate sections
- Figures and tables, if any, embedded at appropriate locations within the manuscript
- A conclusion or summary section following the main body of the manuscript
- List of references
- Manuscripts may include acknowledgments, appendices, a glossary of words and symbols

“The assessment of the manuscripts will be conducted according to the following two sets of criteria and established measures for each.

“The first set of criteria concerns the document’s scholarly content and its contribution in one or more of the following ways:

- Addresses issues relevant to Process Education philosophy and implementation
- Employs Process Educational principles and methodologies
- Presents an original contribution to Process Education knowledge map

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- Appeals to wide range of Process Educators
- Expands upon relevant Process Education references and bodies of knowledge

“The second set of criteria concerns the quality and presentation of the manuscript:

- Provide a clear, concise, and accurate representation
- Use appropriate and well-defined terminology
- Adhere to journal standards and style
- Be self-contained and well integrated
- Exhibit a high level of quality and attention to details

There are many good ideas we can glean from the IJPE review process, although ASCUE will need to develop its own set of criteria.

SIGCSE Model

Appendix 2 contains a copy of the review form for the SIGCSE conference proceedings. Referees are recruited from the SIGCSE membership and each volunteer is asked to specify the subfields in which they consider themselves to be expert. The conference chair attempts to only assign papers in these subfield to a given reviewer. There are usually enough reviewers that no one needs to read and assess more than four or five papers. Each criterion and the overall paper are scored on a scale of 1-6. Generally, a paper needs to receive a 5 or 6 in all areas from each of three reviewers for it to be accepted.

The author was a SIGCSE reviewer for many years and found its refereeing process to be relatively problem free. All aspects of the process are handled online. Each September, those who were reviewers in the past are asked by email if they wish to repeat, and if so, they are asked to update their profile online. Each reviewer is sent four or five papers in early October and asked to complete the assessment form for each paper online within six weeks, and submit it to the editor. Each paper is reviewed by three referees, and their comments are made available anonymously to both the authors and the other reviewers after the decision is made to accept or reject the paper. Reading the comments of other reviewers helps referees improve their skills.

Conclusions

This paper examined the referee processes of two organizations and compared them to the proposed process for reviewing ASCUE papers. The latter procedure seems workable and should incorporate the best practices of both organizations – i.e., be supportive of authors as in the IJPE model, and do as much online as possible as in the SIGCSE model. A double-blind process in which neither the reviewers nor the authors are aware of the others’ identities seems to produce the best results. The next step is for the ASCUE membership to examine this proposal and vote to accept or reject it. If approved at the business meeting, the Board will have to identify a list of criteria and decide how to score the papers. If a cadre of referees can be selected at the Fall Board meeting, we should be able to review papers for the 2009 conference.

References

<http://www-jime.open.ac.uk/about.html#lifecycle> - Open Peer Review Process

<http://eprints.ecs.soton.ac.uk/13105/1/399we23.htm> - The Origin of the Scientific Journal and the Process of Peer Review

<http://db.grinnell.edu/sigcse/sigcse2006/Reviewers/proposalReviewForm.asp> – SIGCSE review form

<http://www.i-jpe.org/authors.htm> – IJPE Author's Guide

<http://www.i-jpe.org/review.htm> – IJPE Reviewer's Guide

Appendix 1 – IJPE Review Form

INSTRUCTIONS FOR REVIEWERS:

1. I feel my professional experience qualifies me to evaluate this paper:
 - Well
 - Moderately
 - Minimally
2. To the best of your knowledge, has the essence of this paper been previously published?
 - Yes
 - No
3. Please rate the following with regard to this paper's worthiness for publication based on the following 10 areas (Judgment Basis Score: 8 -10 Excellent, 6-8 Good, 4- 6 Average, 3- 4 Below average, 1-2 Poor)
 - Relevance to the journal mission and scope
 - Contribution to the current state knowledge
 - Is innovative, or constructive
 - Validity of approach, i.e., processes, methodologies, techniques
 - Quality of information or data
 - Has professional integrity: i.e., credits prior work, objective
 - Has clear presentation (writing, organization, format, tables, and graphics)
 - Depth of discussion
 - Soundness of conclusions
 - Has long-term archival value
4. Please Rate the Manuscript for Publication:
 - **Approved** (all areas are good, 4 areas are average but total score more than 60)
 - **Approved, if modified**
 - **Disapproved** (total score less than 40, 4 areas below average)
5. If the paper is not approved the reviewer's comments should follow the SII format. An assessment should be provided for each area that did not score 6 and above.

Appendix 2 - Reviewer Report Form for SIGCSE Papers

Note to the Reviewer: All the information in this form will eventually be sent to the Author of the paper with the exception of the reviewer name and the private comments to the Program Committee. These two confidential items are written in red and have the symbol # preceding them.

Additionally, all reviews submitted for a paper will be distributed to all reviewers of that paper. It is hoped that, over time, this feedback will help reviewers improve their reviews as they can compare their responses to those of others.

This form uses Javascript for error checking. If this feature is disabled, the system will work, but error messages may be relatively generic.

Paper Number:

Title:

Reviewer Number (Sent to Each Reviewer):

Reviewer's familiarity with topic of Paper: Low Medium High

Focus: In your opinion, at what area(s) is the paper directed? Indicate all that apply.

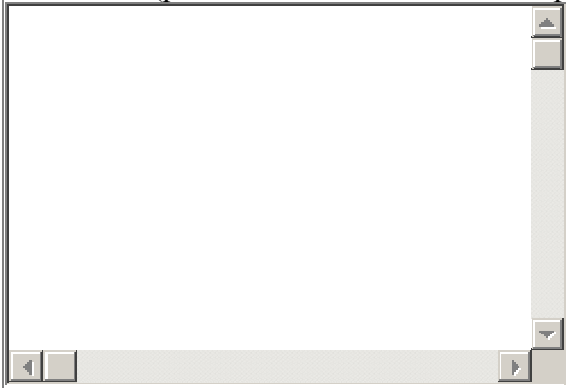
Course Related

- | | | |
|-------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------|
| <input type="checkbox"/> Algorithms | <input type="checkbox"/> Architecture | <input type="checkbox"/> Artificial Intelligence |
| <input type="checkbox"/> Bioinformatics/Computational Science | <input type="checkbox"/> Compilers | <input type="checkbox"/> CS1/2 |
| <input type="checkbox"/> Database | <input type="checkbox"/> Discrete Mathematics | <input type="checkbox"/> Formal Methods |
| <input type="checkbox"/> Graphics/Visualization | <input type="checkbox"/> High-Performance Computing | <input type="checkbox"/> Human-Computer Interface |
| <input type="checkbox"/> Networks | <input type="checkbox"/> Numerical Methods | <input type="checkbox"/> Operating Systems |
| <input type="checkbox"/> Programming Languages | <input type="checkbox"/> Real-Time/Embedded Systems | <input type="checkbox"/> Security |
| <input type="checkbox"/> Software Engineering | <input type="checkbox"/> Supporting Courses | <input type="checkbox"/> Theory |

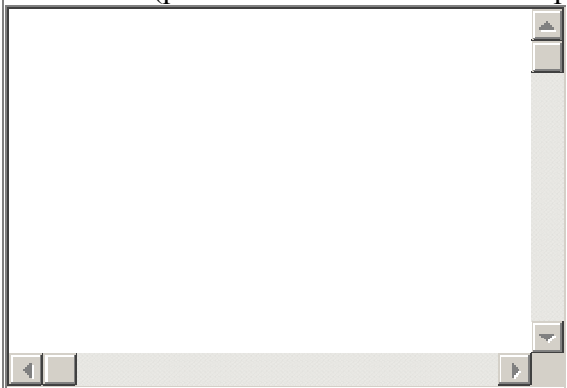
General Topics

- | | | |
|------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| <input type="checkbox"/> Accessibility | <input type="checkbox"/> AP/IB Courses & Curricula | <input type="checkbox"/> Assessment |
| <input type="checkbox"/> Classroom Management | <input type="checkbox"/> Communication Skills | <input type="checkbox"/> Computers and Society |
| <input type="checkbox"/> Courseware | <input type="checkbox"/> CS Ed Research | <input type="checkbox"/> Curriculum Issues |
| <input type="checkbox"/> Distance Education | <input type="checkbox"/> Ethical/Societal Issues | <input type="checkbox"/> Gender and Diversity Issues |
| <input type="checkbox"/> Information Systems | <input type="checkbox"/> Information Technology | <input type="checkbox"/> Laboratory/Active Learning |
| <input type="checkbox"/> Multimedia | <input type="checkbox"/> Non-majors | <input type="checkbox"/> Non-traditional Students |
| <input type="checkbox"/> Object-Oriented Issues | <input type="checkbox"/> Pedagogy | <input type="checkbox"/> Student Research/Capstones/Internships |
| <input type="checkbox"/> Emerging Instructional Technologies | <input type="checkbox"/> Web-based Techniques/Services | |
| <input type="checkbox"/> Other | | |
| <input type="checkbox"/> Not Related To SIGCSE | | |

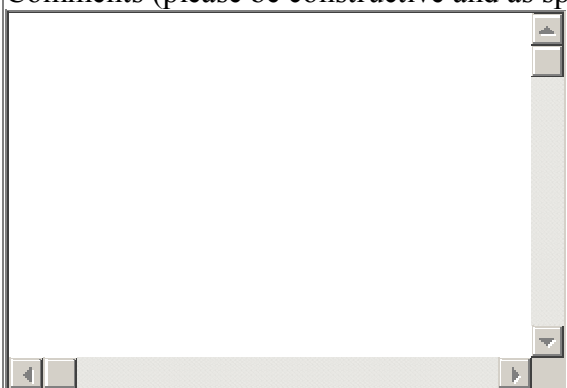
Originality of the paper:

<input type="radio"/> 6 Exceptional <input type="radio"/> 5 Outstanding <input type="radio"/> 4 Very Good <input type="radio"/> 3 Average <input type="radio"/> 2 Below Average <input type="radio"/> 1 Deficient	Comments (please be constructive and as specific as possible): 
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Significance of the paper:

<input type="radio"/> 6 Exceptional <input type="radio"/> 5 Outstanding <input type="radio"/> 4 Very Good <input type="radio"/> 3 Average <input type="radio"/> 2 Below Average <input type="radio"/> 1 Deficient	Comments (please be constructive and as specific as possible): 
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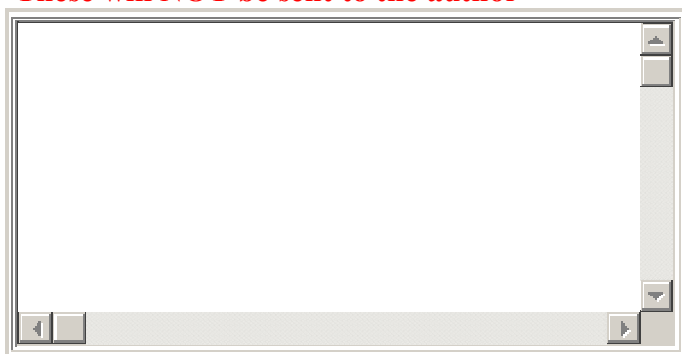
Overall Recommendation:

<input type="radio"/> 6 Exceptional <input type="radio"/> 5 Outstanding <input type="radio"/> 4 Very Good <input type="radio"/> 3 Good <input type="radio"/> 2 Below Average <input type="radio"/> 1 Deficient	Comments (please be constructive and as specific as possible): 
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Suggestions for presentation at the symposium if the paper is accepted:

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**# Write your confidential comments for the Program Committee.
These will NOT be sent to the author**

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Form created 2 June 1999

Form last revised 14 September 2006

Form with data generated by script April 30, 2008

Please report any problems regarding the reviewing process to the SIGCSE

2007 Database Coordinators at sigcse@cs.grinnell.edu.