Understanding the Research Publication Process

Research involves a progression of discovering, proving, and sharing. Good research results must be recognized by and disseminated to colleagues at large and, oftentimes, more broadly so that society might also benefit. However, the process of getting research results accepted to an established magazine or journal can be stressful. Through the years, I have served as a department editor (DE), an associate editor (AE), and now, the Editor in Chief (EIC) of CiSE. Therefore, I would like to share my experiences with the manuscript review process, with the goal of increasing readers’ and potential authors’ understanding.

Today, publication venues are numerous and diverse. CiSE is a leading research magazine with a significant impact on science and engineering. It runs special issues on various topics at the discretion of the editorial board and the EIC. It shares crossdisciplinary knowledge to a broad scientific audience. CiSE also publishes peer-reviewed research articles, and departments spanning news and analyses, topical reviews, tutorials, case studies, and more.

Department and research article submissions are handled differently. If you are interested in submitting an article to a department, such as Diversity and Inclusion, Leadership Computing, or Visualization Corner, you may contact the DEs directly (for contact information, please see CiSE’s masthead in this issue, or visit the magazine’s homepage at publications.computer.org/cise). DEs will work with authors to review and submit columns for publication.

If you desire to submit a full-length paper, you should go through the online peer review system ScholarOne (mc.manuscriptcentral.com/cise-cs). Once a manuscript is submitted, the review and decision process is as follows. If the paper is being submitted to a special issue or track, it will be assigned to the respective special issue guest editor or track editor. For regular feature articles (that is, not associated with a particular theme or track), the EIC will first review the abstract, keywords, and so on to decide which AE will handle the peer review. Ideally the AE would be an expert on the paper’s topic, but in the real world, there is not always someone on the editorial board who is an expert. While CiSE’s number of board members is limited, the potential research topics and results are boundless. When I was an AE, more than half of the papers I managed were not really in my research area. So, it is important that you, as the author, recommend established experts in the research field as potential reviewers. To avoid conflicts of interest, you should state the reason for a particular recommendation and clarify that you have no association with the potential reviewers.

Once AEs receive an article, they use their discretion to select reviewers in a closely related field within a week or so. After reviewing the article themselves, they select reviewers by asking established experts they know, searching online using keywords from the paper, searching and
contacting authors from the paper’s references, contacting the recommended reviewers, and so on. This process is possibly lengthy. First, the selected reviewers might not respond. Second, an agreed reviewer might not return the review; so, after a waiting over a month, the reviewer selection process might have to start again. Third, no proper reviewer might be found. So, there is always the possibility that after a prolonged period, no progress is made in the review process. One action that you can take to facilitate the process is to highlight the paper’s keywords so that relevant researchers can be more easily searched and found. It is also good to suggest authors of articles on similar research, because these individuals can quickly identify the merit of the work and submit comments. If your article is in submission for more than three months, you may submit an inquiry about its status to the magazine.

In general, a reviewer has approximately three weeks to return review comments with a recommendation. Once the AE receives enough reviews (typically two), he or she has two weeks to make a recommendation—accept, minor revision, major revision, or reject—with comments. The EIC will then review all this information to make a final decision. An accept means accepting the submission as is, with no further changes. Such submissions will not be seen again by the AE or by the reviewers. A minor revision means that the AE will evaluate the revised manuscript and make a final recommendation for accept. A major revision means that the revised submission should go back to the original reviewers for a second round of reviews.

Here at CiSE, we seek to uphold objective judgements and accept quality articles, especially those that can be understood by a broader audience. The reviewers and editors are all volunteers who donate their time and effort to this process. Inevitably, there are times when a paper is misunderstood and rejected. In such a case, unfortunately, the decision is final. If your paper is rejected, you might improve it by taking the reviewer comments into consideration and clarifying any misunderstandings, and then resubmitting it to CiSE or another venue. Although a good quality paper might occasionally be rejected, it should eventually be published, because it will be beneficial to all.

In addition to participating as an author, there are many other opportunities to contribute to CiSE: you might consider joining as a reviewer or an editor, or even suggest a special issue. To do so, please contact the EIC directly at jchen@gmu.edu. Reviewers should be at least at the PhD-student level with past scientific journal or magazine publications. Potential editors should be at the associate professor level or higher.

ABOUT THE AUTHOR

Jim X. Chen is a professor of computer science at George Mason University, and EIC of this magazine. His research interests include graphics, virtual reality, and medical imaging. Chen has a PhD in computer science from the University of Central Florida. Contact him at jchen@gmu.edu.