



Organizing a Special Issue of *IEEE SPM*

In my September editorial [1], I outlined the important components of good feature articles in response to feedback from our recent IEEE Periodicals Review and Advisory Committee (PRAC) meeting. In this issue's editorial, I discuss the process of organizing a special issue (SI) for *IEEE Signal Processing Magazine (SPM)*. The purpose is twofold. First, I want to encourage readers to become involved in organizing an SI. Second, I want to provide more information about the decision-making process so that authors understand how they can have an article accepted.

I begin this description with some background information about SIs. An SI is a collection of articles that focuses on a specific topical area and is generated in response to an SI call for papers [2]. SI articles, like feature articles, are tutorial in nature. As is the case with feature articles [1], SI articles should not include any new ideas or fundamental results that could appear in, e.g., *IEEE Transactions on Signal Processing*. Any article that features new results is not within the scope of an SI article and will be rejected.

The composition of an SI article is similar to that of a feature article, with two important differences. First, SI articles are more focused than feature articles; this is because there will be a collection of approximately 10 articles that address different aspects of the same research area. As a result, less background and overview

of the general topic reduces the amount of overlap among articles. Second, SI articles are shorter than feature articles. When submitted, they may be up to 20 single-column double-spaced pages, including up to 10 figures and 30 references. Feature articles are allowed twice as many pages, more figures, and more references. These two aspects mean that a rejected feature article is not a good fit for resubmission to an SI (without significant reduction), nor is a rejected SI article a good fit for a regular issue (without further expansion).

Assembling an SI proposal

Before officially proposing a specific topic, I encourage prospective guest editors to discuss the appropriateness of the topic with SI Area Editor Namrata Vaswani namrata@iastate.edu, or me, *SPM*'s editor-in-chief (EIC). We can also send you a current copy of *SPM*'s *Special Issues' Guest Editors' Handbook*.

The process of initiating an SI starts with a proposal and a draft call for papers. This proposal is sent out to the Senior Editorial Board for their review. The feedback from five to 10 board members is then relayed to the proposing team, along with additional comments from the area editor and possibly the EIC. Based on that feedback, a decision is made whether to accept the SI, request a revision of the SI proposal, or an outright rejection. It is normal for one

round of revisions to occur to address board comments.

The formal proposal includes several components. The first and foremost section is the introduction, where you encourage interest in the topic and make the case for the SI being timely and relevant. A tentative list of topics should then be

provided to help the committee understand what you have in mind in terms of the scope of the issue. The next section is a list of potential authors. We ask for this information so

that we may evaluate the likelihood that the issue will receive enough submissions. It is important to note that these authors are not "invited"; rather, they will be asked to consider a submission. The next section is a summary of the relationship of this SI to other SIs (possibly in other publications). We then ask for biographies of the guest editors. Here, you want to show that your team is qualified, has a track record in various associate editorial roles, and has broad representation. Most issues have three to five guest editors. We solicit this information to ensure that there are no competing SIs in other venues that may reduce the number of potential submissions. Finally, a draft call for papers should be given; a template can be provided by the EIC.

Characteristics of good SI topics

Unless the SI has a historical theme, the topic should be timely and relevant for the signal processing community. Such

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topics may be the subject of special sessions at conferences or not. In short, they should be topics of great interest to both authors and readers in one year's time (the typical time between submission of a white paper and publication in the magazine).

It is important to refine the scope of the SI so that it is neither too narrow nor too broad. An ideal SI will receive between 25 and 40 white papers, with roughly 15 accepted for full submission, and, approximately 12 accepted eventually. Occasionally, a double SI will be permitted if there are enough high-quality white papers submitted, but this is rare.

The review of white papers is handled by the guest editors of the SI and a liaison from the Senior Editorial Board (papers by the guest editors are handled by the liaison, the area editor for SIs, or the EIC). This review is holistic: Accepted white papers must be of high quality with minimal overlap of other accepted papers, which ensures that the SI covers a diverse set of topics. In some cases, when the white paper topics are similar, the authors will be invited to consider combining their papers. Although it is not a requirement, it can be a good opportunity for authors to broaden their collaborations.

From an author's perspective

An author's first step is preparing his or her white paper. The following characteristics make for an insightful white paper:

- **Relevance:** As with feature articles, some SI submissions are out of scope.
- **Topical focus:** In particular, the paper should address a subset of material relevant for the SI, not the entire issue. An exception to this could be made if the guest editors want to prepare an introductory article for their issue.
- **Diverse author team:** For example, a paper with authors from multiple research groups will have additional merit for broad representation.

■ **Author expertise:** The editorial team has more confidence in an SI submission when the authors have previously published some related work.

■ **A well-written paper:** Good white papers are polished, proofread, and complete.

Even papers that have all of these features may not be invited for full submission if there are multiple papers on competing topics or magazine space constraints.

If your white paper is accepted, then you need to diligently prepare your full paper. The SI timeline is driven by the eventual publication in a specific month and year for the magazine. Guest editors have little flexibility in adjusting dates of publication to accommodate potential delays in submission. As a result, authors should be prepared to stick to the published timelines.

Upon full submission, SI articles are assigned to an associate editor for further review. The procedure that follows is the same as for feature articles; see [1]. The associate editor is usually selected from one of the guest editors, except

in cases of conflict. At this point, the article begins the formal review process. External reviewers are solicited by experts to provide feedback on the article. The associate editor then decides on the paper based on his or her own reading and the opinions from reviewers. Manuscripts may be rejected at this stage or given an opportunity for a revision. If you are encouraged to revise your manuscript, it is critical that you address the comments from the reviewers in the paper and provide a detailed reply to reviewers as a separate PDF file. Do your best to be thoughtful in your edits and your reply, as simply arguing with the reviewers seldom leads to a positive outcome. Typically, there is only one round of major reviews.

General suggestions about preparing a good, full-length article can be found in [1]. The main considerations are the page length, number of figures, and corresponding restricted scope. As with

feature articles, consider using equations where appropriate. Additionally, put considerable thought into meaningful numerical experiments and eye-catching graphics. Common criticisms of full papers include the following:

- **Too much textbook or introductory material:** Remember that the SI collects more focused contributions and has limited length. You may find it useful to obtain a list of white papers invited for full paper submission to see which topics require more background.
- **Not polished, proofread, or missing good paragraph and section structure:** Poor writing is distracting in a tutorial paper. Be sure to write carefully, proofread, and revise your manuscript as a team prior to submission. If time permits, obtain feedback from other colleagues or students.
- **The reference list is not well chosen:** The selection of references can be challenging when limited to only 30 papers. Good papers will find a balance between citing the authors' own work (please use self-constraint) and work from other groups.
- **The paper is overly technical.** This comment occurs, for example, when there are many pages of notation and definitions which serve little purpose in conveying the key points. While we encourage mathematics in the articles, what is included must be carefully curated.

I hope that this editorial will be useful to potential SI organizers and authors. See [3] for current SI deadlines.

References

- [1] R. W. Heath, Jr., "Making a good feature article submission," *IEEE Signal Process. Mag.*, vol. 36, no. 5, pp. 3–4, 2019.
- [2] IEEE Signal Processing Society, "SPM." Accessed on: Sept. 30, 2019. [Online]. Available: <https://signalprocessingsociety.org/tags/spm>
- [3] IEEE Signal Processing Society, "Publications special issue deadlines." Accessed on: Sept. 30, 2019. [Online]. Available: <https://signalprocessingsociety.org/publications-resources/special-issue-deadlines>



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