



Transforming a Conference Paper into a Journal Article

The ISIF VP for Conferences and the editorial board for JAIF regularly encourage authors to submit their papers that have been published in the Proceedings of the International Conference on Information Fusion (ICIF) to JAIF. Papers published in peer-reviewed journals such as JAIF receive much broader archival exposure, as I discussed in my editorial in the June 2008 issue. However, the expectations and standards for peer-reviewed journal papers are quite higher than those for conference papers. Over the years, I have authored numerous conference papers and after some maturing of the contributions in two or three of those papers, I have integrated the results into a journal submission. For example, I authored a paper in the 2008 ICIF on the design of nearly constant velocity track filters for sustained maneuvers. After the conference, I decided that the design procedures should be extended to brief maneuvers to make a contribution worthy a journal paper. I also noted that improvements were needed in the notation and presentation of the method. In the 2011 ICIF, I authored a paper that extended the results of 2008 to brief maneuvers and used the improved notation. Now, I am preparing a journal submission on the design of nearly constant velocity filters for tracking maneuvering targets.

Based on my experience, I have developed some suggestions for transforming a conference paper into a manuscript that will be successful in the peer review process of JAIF or other peer-reviewed journal.

1. **Significance of Contribution** One should first consider the significance of the contribution of the conference paper. Is the contribution novel? Will others build upon this research? Will others use it in their research or work? In five years, will the results still be important? If the results are novel and the answers to a couple of these questions are yes, then you should consider preparing a journal submission. An author of a conference paper is rarely left without an idea for improving the contribution in their paper. Then, make a list of potential improvements

that you have identified in the process of writing and presenting the paper. From the list of improvements, identify the ones that make the contribution whole without a disproportionately large level of effort and then complete those contributions.

2. **Introduction** Revise the introduction as needed to clearly describe the problem under consideration and include a very thorough survey of the related literature with references. Carefully and succinctly describe the contribution of the paper. Authors tend to be a little ambiguous in the description of the contribution of their paper, and this is a common mistake because referees are expected (and can be relied on) to doubt and challenge the contribution of a paper. Ambiguity in the statement of the contribution tends to raise concerns with the referees. Remember that it is better to have a small contribution that is well elucidated than a great contribution that is questionable.
3. **Problem Definition and Background Material** Review your formulation, notation and definition of the problem and make improvements based on your experience with the conference paper. Also, add or remove background material as appropriate.
4. **Contribution** Examine the core contributions of the paper for potential improvement in the presentation of those contributions. Look for missing items and potential extensions in the development of the contributions. If a referee cannot follow the development of the contributions, your manuscript is likely to be rejected.
5. **Example or Simulation Results** Consider improving the paper with a better example or different results. You should consider using a different example and pointing the reader to the example in your conference paper for additional results. Also, make sure that you

have included all of the parameters and simulation details needed to reconstruct the results. (Otherwise, the only suitable place for submission is JIR—the Journal of Irreproducible Results.) Failure to give a proper level of details from the simulation results raises questions with the referees. The feedback that one receives at a conference most often addresses this topic. Compare your results with what you think is the best “competition” in the literature.

6. **Concluding Remark** In the concluding section (and there must be one!), concisely summarize the contributions of the paper and include any limitations of your research. If you do not provide the limitations of your results, the referee will likely make an assessment based on an application you do not want, and he/she will have less motivation to have the manuscript published in the JAIF. Also, address the significance of the contribution. This is the author's opportunity to make the case for publication of the manuscript. Then, the author should provide some comments on further research and these comments will support the significance of the paper.
7. **Abstract** After finishing your revision of the manuscript for journal submission, review the abstract to ensure that it accurately reflects the new version of the manuscript.

I encourage authors of ICIF papers to transform their conference papers for journal submissions for JAIF. Publication of your research in a peer-reviewed journal such as JAIF will give it much broader archival exposure. Furthermore, the peer-review process will certainly improve your research and leave you with the sense of accomplishment.

William Dale Blair
Editor In Chief