

## How To Write Relevant Articles for *IEEE SPM's* Lecture Notes Column

Rodrigo Capobianco Guido and Vicky Zhao

In our role as *IEEE Signal Processing Magazine (SPM)* editors, we have received a significant number of submissions for different columns, including Lecture Notes articles (LNAs). Nevertheless, according to our prescreening, many of them fail to match the requirements for publication and even for entering the peer-review stage. Consequently, the correct comprehension of the style of submissions we expect to receive is, clearly, the first step to a successful submission.

First, it is of paramount importance to understand that LNAs are **tutorial-like** articles, **not** articles reporting new research results! Therefore, we definitively do **not** expect to find LNAs submissions containing statements such as "... the new method we report in this article reveals a better accuracy in comparison with...". Indeed, that is definitively **not** the case!

Particularly, LNAs are part of the signal processing (SP) "learning" category, being dedicated to track the main directions in SP research, possibly by using pieces of work from major conferences and workshops to present in-depth materials that have not been covered sufficiently in textbooks or related tutorials yet. Thus, the target audience of LNAs consists of all readers who enjoy presentations in a tutorial- or classroom-like style, since those articles are expected to resemble a "whiteboard presentation" and, hence, excessive math should be avoided as much as possible. For consistency across different issues and topics, **LNAs make use of the following predefined format that must be followed:**

- **Scope**: one paragraph describing the main idea, similar to an article's abstract.
- **Relevance**: one or two paragraphs describing the importance of the LNA.
- **Prerequisites**: one short paragraph describing the main concepts the readers are expected to know beforehand, for a smooth reading of the LNA. The authors can possibly suggest, just as a complement, a few references for the readers to follow. However, the presentation should be self-containing in such a way that anyone with a general SP background should easily comprehend the article without reading the references.
- **Problem Statement**: a few paragraphs where the main problem is clearly stated. This section is strongly expected to contain, at its end, a sentence such as "*Consequently, the problem for which we show the solution in this lecture notes article is ...*".
- **Solution**: a sequence of paragraphs explaining, clearly, the solution to the problem the authors have stated in the previous section.

- **Numerical Example**: a few paragraphs providing a numerical example, preferably to be followed by hand, whenever possible. If that is impracticable, then the section could be renamed to “Computational Example” to describe an example accordingly.
- **What we have learned**: one paragraph containing the conclusions and emphasizing what the readers could have learned after reading the LNA.
- **Author(s) Short Bios**: ~ 100 words for each bio.
- **References**: up to 12 references, in IEEE standard format.

Additionally, the title is expected to be short and concise, and the figures need to be sized so as to have a width equal to one, two, or three columns, since *SPM* is published using three columns. Furthermore, we expect the LNA topic to find applications in a wide variety of SP fields, not only in a specific subfield. A LaTeX/Word template is available to help [1]. Readers might also want to consult the “Information to Authors” [2] for complementary information. Notably, authors are encouraged to provide links to extra material, such as MATLAB code with demonstrations and practical examples for students, which could be the starting point for practical classrooms experiments, for instance.

Some people might think that they need to be very well-known researchers or established educators in the SP field to “have the right” to submit an LNA: this is **not at all** the case. Everyone is encouraged to contribute to the column whenever a great and suitable manuscript comes to mind. It is a good starting point to take a look at some recently published LNAs to familiarize with the format beforehand.

Finally, it is worth mentioning that anyone who has an idea in mind is **strongly encouraged** to email the area or associate editor(s) in advance. The editors can not only help in tailoring the topic to fit the LNA better, but are also happy to give further advice about the expected style and presentation. We hope that our readers take this guide also as an encouragement to submit an LNA!

## References

- [1] IEEE Signal Processing Magazine, “Information for authors—SPM.” [Online]. Available: <https://signalprocessingsociety.org/publications-resources/ieee-signal-processing-magazine/information-authors-spm>
- [2] IEEE Signal Processing Magazine, “SPM columns LaTeX/Word templates.” [Online]. Available: <https://signalprocessingsociety.org/publications-resources/ieee-signal-processing-magazine/about>