



Introducing *SPM*'s New Team of Area Editors: Part 2

In my March editorial in *IEEE Signal Processing Magazine (SPM)* [1], I presented the new area editors for feature articles, outreach and social media, as well as for the eNewsletter. In this issue, I announce the two area editors for columns and forums and the new area editor for special issues. In addition to the area editors, as I previously explained in the March issue, *SPM* benefits from the valuable help and wide expertise, in signal and image processing (SIP) and its applications, of the senior and associate editors who form the Editorial Board.

Introducing three new area editors

Columns and forums

Rodrigo Guido



I have been in love with signal processing and electronics since my childhood, long before receiving my B.Sc. degrees in computer science and computer engineering. Since receiving my Ph.D. degree in signal processing from the University of São Paulo, Brazil, in 2003, I have been involved with editorial activities. As an associate professor at São Paulo State University, I have contributed to dozens of scientific journals, serving as a guest editor, an

sociate editor, and an area editor. I have focused my research on speech processing-related topics where, from the digital side, a combination of machine learning and wavelet transforms approaches are the main tools and, from the analog side, radio-frequency circuitry is a passion. I am extremely glad to serve as the co-area editor of columns and forums for *SPM*, contributing to our community of students, scientists, and engineers in the fantastic world of signal processing. Please do not hesitate to contact me at guido@ieee.org if you have any questions. It is always a great pleasure to help.

Vicky Zhao



I am an associate professor in the Department of Automation, Tsinghua University, China. Before joining Tsinghua University, I was with the Department of Electrical and Computer Engineering, University of Alberta, Edmonton, Canada, as an assistant professor (2006–2012) and associate professor (2012–2016). My research interests include media-sharing social networks, information security and forensics, digital signal processing, and communications. I received the IEEE Signal Processing Society 2008

***SPM*'s columns and forums articles are intended to provide high-level material focused on different content, types of coverage, and target audiences.**

Young Author Best Paper Award and the Asia-Pacific Signal and Information Processing Annual Summit and Conference 2020 Best Paper Award. I have been active in professional societies, serving as a senior area editor

of *IEEE Signal Processing Letters* and an associate editor of *IEEE Open Journal of Signal Processing*, *IEEE Transactions on Information Forensics and Security*, *IEEE Signal Processing Letters*, and *SPM*. I also serve as an organizing committee member for IEEE conferences and workshops, including IEEE ICASSP, IEEE ICIP, IEEE International Conference on Multimedia and Expo, IEEE International Workshop on Information Forensics and Security, and IEEE International Workshop on Multimedia Signal Processing. If you have any suggestions or would like to contribute, please feel free to contact me at vzhao@tsinghua.edu.cn.

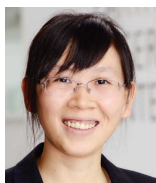
Submit contributions

SPM's columns and forums articles are intended to provide high-level material focused on different content, types of coverage, and target audiences. In particular, they aim to deliver tutorial-like lessons with relevant insights and to track recent technological advances, balancing theoretical and experimental aspects and offering diversified coverage in the

wide signal processing area. As the area editors of *SPM*'s columns and forums, we encourage all researchers, engineers, and scientists to share relevant material, recent news, working experiences, views related to signal processing, and even funny stories and cartoons to lighten life a little bit. We look forward to receiving your contributions.

Special issues

Xiaoxiang Zhu



I received my M.Sc. degree, Dr.-Ing. degree, and “Habilitation” in the field of signal processing from the Technical University of Munich (TUM), in 2008, 2011, and 2013, respectively. I am a professor of data science in Earth observation at TUM, and I head the Department of Earth Observation Data Science at the German Aerospace Center. I am also the director of the international artificial intelligence (AI) future lab AI4EO; codirector of the Munich Data Science Institute, TUM; co-spokesperson for the Munich Data Science Research School; and head of the Helmholtz aeronautics, space, and transport AI research field. I was a guest scientist and visiting professor at the Italian National Research Council, Fudan University, University of Tokyo, and University of California, Los Angeles, in 2009, 2014, 2015, and 2016, respectively. My research interests include remote sensing and Earth observation, signal processing, machine learning, and data science, with a special application focus on monitoring global urbanization. I am a Fellow of IEEE and a member of the Junge Akademie/Junges Kolleg, Berlin–Brandenburg Academy of Sciences and Humanities, German National Academy of Sciences Leopoldina, and Bavarian Academy of Sciences and Humanities. *SPM* is one of my favorite magazines, and I am happy to serve as the area editor

of special issues, which aim to address pressing signal processing research topics that are highly relevant to a broad community. Please do not hesitate to contact me at xiaoxiang.zhu@dlr.de if you wish to see a special issue on an interesting topic that has not been covered or organize a special issue yourself.

In this issue

The theme of this special issue is “Innovation Starts With Education.” It is based on an ICASSP 2019 panel about education [2]. Clearly, this topic is of great interest since many of us are involved in teaching signal processing at the bachelor's, master's, and doctoral levels and as supervisors of trainees and postdocs at companies and in research labs. Sixteen articles constitute the special issue, proposing many approaches and telling us about various experiences at numerous universities worldwide.

But first, Prof. A. Oppenheim and Prof. A. Constantinides present their article “Reflections After 50-Plus Years in the Classroom” [3] in the “Reflections” column. I encourage you to read Prof. Oppenheim's previous columns about education [4] (in 1992) and research [5] (in 2006) to understand his views and how they have changed, especially in the context of technological advances but also during the COVID-19

pandemic. Basically, I take from these articles—I hope not to betray his thoughts—that in addition to instilling the basics in students, it is fundamental to be attentive to pupils' motivations and interests, to let them have some fun and

develop their creativity. Another point concerns the dual role of mentor and friend: this is possible with Ph.D. students and postdocs because of the intensive interactions that are involved, but I believe it is much more difficult in bachelor's and master's classes that have tens of students. Finally, I note that Prof. Oppenheim never learned to teach, and surprisingly, it seems that this is true in most countries.

In fact, all the articles in this special issue focus on some of these facets, which seem to be “invariants,” and readers will profit from the authors' ideas, experiences, feedback, and reflections, which will certainly be helpful for developing and delivering lectures. I also discovered (after 40 years of teaching!) the concepts of Bloom's taxonomy and Kolb's cycle. One of the difficulties of teaching SIP is that it requires instructors to impart a mastery of mathematics and statistics. On the other hand, SIP is a dream discipline since it can be useful in so many interesting—and sometimes funny—applications. To develop students' creativity, and even to help them understand basic concepts, it is easy to choose music, speech, biomedical signals, images, robotics, and others that can be fun and stimulating. It is also clear that the authors select diverse applications that are strongly related to their own research activities, illustrating how teaching and research duality is essential. Of course, project-based learning is present in many approaches for enhancing students' creativity, and addressing problems to which there is no unique solution but many approaches that can be rigorously discussed, implemented, and evaluated.

Beyond fostering SIP skills, enhancing creativity, and addressing multidisciplinary applications, projects open the way to honest benchmarking, which is the cornerstone of open-access and reproducible science. Currently, with massive open online courses and virtual conferences, such as ICASSP and ICIP in 2020, there is a wide diversity of documents that can be used anywhere at any time and enhance more classical ways of teaching. Finally, there is intense pressure from students and industry to teach fashionable technologies such as machine learning and deep learning: for SIP instructors, this presents an opportunity to trade between white- and black-box methods—model and data driven—and make students attentive to the explainability and robustness of approaches that could seem like magic and that must be applied with critical thinking and intelligence.

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Most of the experiments presented in this special issue have been conducted, at least partly, during the past year, which was a strange one for education. Practically overnight, we had to teach remotely, speaking to a screen, with very little interaction with our students. In a blink of an eye, practical work and group projects became more complicated, if not impossible. You can certainly relate through your own teaching experience: how you fared and what tricks you used to motivate your stu-

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you can share an interesting teaching experience in a "Lecture Notes" column, if possible, with additional materials, such as exercises and quizzes for student assessments and codes for experiments. If you are interested, feel free to email your ideas to the area editors for columns and forums, Prof. Guido and Prof. Zhao.

dents and ensure their well-being as much as possible.

I would like to mention that, beyond this special issue, in any *SPM* issue,

References

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