



Introducing *SPM*'s New Team of Area Editors: Part 1

This past summer, Prof. Robert Heath Jr., *IEEE Signal Processing Magazine's (SPM's)* former editor-in-chief, stressed to me how important it is to include a strong team of scientists on the magazine's editorial board. It is especially important for area editors and members of the senior editorial board, but also associate editors for columns and forums as well as the e-Newsletter. In his November 2020 editorial in *SPM*, he pointed out how important all the editorial board members were [1]. In particular, the tasks of area editors strongly depend on the categories: special issue articles, feature articles, columns and forums, social media and outreach, or e-Newsletter. Thus, in addition to being recognized scientists, the area editors' profiles can be very different from one another. For feature articles or special issues, the profile is a senior scientist with areas of interest in various domains of signal and image processing. Of course, these area editors also benefit from the broad expertise of the members of the senior editorial board. Conversely, the profile of an area editor for social media and outreach is a scientist, probably younger, who uses social networks (Twitter, LinkedIn, Facebook, YouTube, and so on) in her/his own activities. The area editor for the e-Newsletter, with help of a team of

associate editors, is in charge of keeping IEEE Signal Processing Society (SPS) members engaged each month. They post short news columns regarding the most recent technological SPS developments and stories about members, especially students (including postdoctoral students). The profile of this area editor must be open to public relations.

During the last four months, I have been working to put together the new group of area editors, with the help and advice of Prof. Heath and his team. As potential authors, if you intend to write an article or propose a special issue, your first task will be to send an email explaining your idea to the editor in charge of your targeted area: feature articles, special issues, or columns and forums. With that said, I believe it is important to introduce *SPM's* new area editors. Three are introduced in this editorial: Dr. Laure Blanc-Féraud, feature articles; Dr. Behnaz Ghoraani, e-Newsletter; and Dr. Emil Björnson, social media and outreach. I will continue with the introductions of our area editors in my May 2021 editorial of *SPM*.

Introducing three new area editors

Feature articles

Laure Blanc-Féraud

I am a senior researcher at the Centre national de la recherche scientifique



(CNRS) in the I3S lab (University Côte d'Azur/CNRS) with the Morpheme team, shared with INRIA and the Institute of Biology

Valrose in Sophia Antipolis in France. My research topic concerns image processing, mainly inverse problems, using partial differential equations and calculus of variation, under smooth, nonsmooth and l_0 -sparse constraints. I am currently studying minimization problems using duality, convex and nonconvex optimization, and G-convergence. I am also developing Bayesian modeling for model parameter estimation. After satellite imaging, my applicative domain is now focused on 3D microscopy imaging for biology.

I am a member of the Bio Imaging and Signal Processing Technical Committee and the general chair of the 2021 IEEE International Symposium on Biomedical Imaging. I have been an associate editor of *SIAM Imaging Science* and the French journal *Traitement du Signal*. I headed the French national research group GDR ISIS of CNRS on Information, Signal Image and Vision (more than 120 laboratories and 20 industrial partners) and have been a member of several scientific councils and steering committees at the French national level. I was awarded the Price Montpetit of the French Academy of Sciences, am a knight of the French Legion of Honour, and was a chair of the French National

Artificial Intelligence Interdisciplinary Institute 3IA Côte d'Azur.

I am happy to serve as the area editor of feature articles in *SPM*. As the dissemination of scientific information is multiplying and accelerating, feature articles aim to offer in-depth and comprehensive surveys on a large variety of subjects related to signal processing.

A guideline will be to highlight what fundamentally explains the success of a method, an algorithm, or an applicative method that will be of interest for the whole community, regardless of the individual research topics. Please don't hesitate to contact me at laure.blanc-feraud@i3s.unice.fr if you'd like to see a new subject in these articles or to contribute one yourself.

e-Newsletter

Dr. Behnaz Ghoraani



I received my Ph.D. degree in electrical and computer engineering from Ryerson University in 2010. I am an associate professor and the founder and director of the Biomedical Signal and Image Analysis lab at the Department of Computer & Electrical Engineering at Florida Atlantic University (FAU). Before joining FAU, I was an assistant professor in the Department of Biomedical Engineering at the Rochester Institute of Technology (2012–2016). My research has focused primarily on generating innovative signal analysis solutions to tackle big bottlenecks in medicine, emphasizing long-term and continuous health monitoring, remote and personalized therapeutic management, and nonstationary and multidimensional signal analysis. My research has been funded by research grants from the National Institutes of Health and National Science Foundation.

I have also been active in professional societies, serving as an associate

editor of the online-only open access scientific journal *BioMedical Engineering OnLine* (2019–present), chair of the Young Professionals Committee of the IEEE SPS (2018–2020), associate

editor of *IEEE Signal Processing Newsletter* (2019–2020), in addition to serving as a program committee member and technical program coordinator for several IEEE conferences, including the 2020 IEEE

Engineering in Medicine and Biology Conference and IEEE Life Sciences in 2018 and 2019.

In my new role as the area editor of the e-Newsletter, I am counting on our members' support to share their contributions to science and experience working as a signal processing engineer and scientist. I can be contacted at bghoraani@fau.edu. Hopefully, together we will overcome the challenges facing the COVID-19 pandemic and continue building a brighter future.

Social media and outreach

Dr. Emil Björnson



I received my master's degree from Lund University, Sweden, in 2007 and my Ph.D. degree from the KTH Royal Institute of Technology, Sweden, in 2011. I am currently an associate professor at Linköping University, Sweden, and, since 2020, a visiting full professor at the KTH Royal Institute of Technology. My research interests are in signal processing for communications. I have authored the textbooks *Optimal Resource Allocation in Coordinated Multi-Cell Systems*, *Massive MIMO Networks: Spectral, Energy, and Hardware Efficiency*, and *Foundations of User-Centric Cell-Free Massive MIMO*. I received the 2020 Pierre-Simon Laplace Early Career Technical Achievement Award and the 2019 EURASIP Early Career Award.

I have been a proponent for research reproducibility (e.g., code and data shar-

ing) and open publication for almost a decade. The open science paradigm is an important way to reach not only the general public but also students and faculty in developing parts of the world. I have also been increasingly active on social media, particularly on YouTube, where I have a channel called "Wireless Future"; my blog on massive multiple-input, multiple-output; and LinkedIn. Social media has become an important vehicle for outreach and dissemination. As students and researchers become flooded with information and noise from everywhere, content curation from trusted authorities becomes essential. During my time as an area editor, I will strengthen *SPM*'s efforts in disseminating its great articles on social media as well as explore new ways to reach out to students and fellow researchers. I can be contacted at emilbj@kth.se.

In This Issue

This issue of *SPM* includes four interesting feature articles, i.e., tutorials written for a broad audience on various topics. I was attracted to Monga et al.'s article on algorithm unrolling, which shows how each iteration of an algorithm can be implemented as a layer in a deep neural network. This way of thinking allows efficient algorithm implementation but also the ability to interpret the role of the layers in a deep neural network, which is an essential issue for achieving interpretable and explainable machine learning. I also enjoyed the article by Bernardini and Rinaldo on Lie group methods since it addresses some problems I am interested in, and it points out the relevance of choosing metrics suited to the representation space of data or variables.

The articles by Yuan et al. and Adler et al. are also very instructive, although I was not as captivated by the subject matter at first glance. From this observation, as editor-in-chief of *SPM*, I wondered how we could attract more people into reading *SPM* articles. Of course, this remark holds for special issues, too, and also for some articles in the columns and forums category, e.g., "Lecture Notes" or "Applications Corner." Furthermore, we learned from expe-

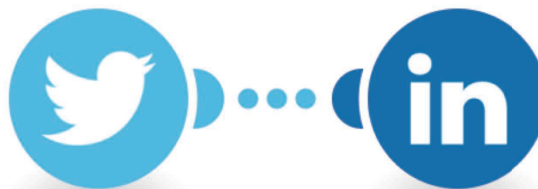
rience that the virtual conferences held during 2020 show that the policy of free virtual registrations will attract a huge number of attendees, many of whom are not SPS members; for example, for ICASSP, there were about 16,000 attendees instead of the usual 3,500! So we are investigating a new video approach to further leverage readership for *SPM*: the idea would be to associate each feature and special issue article in *SPM* with a short (say, 10-min) and simple video presentation designed for a large audience that would be freely available to all. Now,

since many of us are familiar with recording a video presentation using Zoom or other platforms, this additional material is something quite simple to produce. I sincerely think that it will have a double advantage, for both the authors and *SPM*: it will increase the impact of the articles that will be accompanied by such video presentations and also increase the number of readers of *SPM*. Currently, we are studying some practical issues for implementing this idea. For prospective authors who publish in *SPM*, as soon as your manuscript is accepted,

think of this as a nice opportunity for both you and your favorite magazine.

Reference

[1] R. Heath Jr., "Signing off as editor-in-chief," *IEEE Signal Process. Mag.*, vol. 37, no. 6, pp. 3–4, Nov. 2020. doi: 10.1109/MSP.2020.3019614.



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