

Symposium on Design, Implementation and Optimization of Deep Learning for Wireless Communications

General Chairs:

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Witnessing its success in fields including computer vision, speech recognition, bioinformatics, and so on, researchers are considering deep learning for wireless communications. Preliminary results in channel estimation and baseband processing have shown that deep learning can help to understand the wireless contents and produce results comparable and in some cases superior to classic approaches. Though such initiatives have been named, their design, implementation, and optimization are not complete and in infancy. This symposium aims to bring together experts from the design and implementation, computer science as well as communications communities and provide a forum for challenges and solutions of deep learning for wireless communications, with special interests on design and implementation.

Topics include but are not limited to:

- Signal and information processing for wireless communications based on deep learning
- Intelligent learning methods and their implementations for massiveness
- Software-based learning optimization
- Cross-layer deep learning optimization
- Learning for baseband processing
- Massive MIMO related deep learning, particularly signal processing and hardware challenges
- Deep learning for cloud radio access networks and their computation and design challenges
- Hardware and real-time implementations (FPGA and VLSI) for wireless deep learning
- Algorithm-implementation optimization for wireless deep learning
- Heterogeneous deep learning implementations for base stations and user ends
- Advanced solutions for low-latency deep learning communications
- Design methodologies and tools for wireless deep learning
- Other (industrial) related emerging applications.

Paper Submission: Prospective authors are invited to submit full-length papers (up to 4 pages for technical content including figures and possible references, and with one additional optional 5th page containing only references) and extended abstracts (up to 2 pages, for paper-less industry presentations and Ongoing Work presentations) via the GlobalSIP 2018 conference website. Manuscripts should be original (not submitted/published anywhere else) and written in accordance with the standard IEEE double-column paper template. The accepted abstracts will not be indexed in IEEE Xplore, however the abstracts and/or the presentations will be included in the IEEE SPS SigPort. Accepted papers and abstracts will be scheduled in lecture and poster sessions.

Important Dates:

- **June 17, 2018:** Paper submission due
- **Aug. 7, 2018:** Notification of Acceptance
- **Aug. 22, 2018:** Camera-ready paper due.

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