IEEE Journal of Selected Topics in Signal Processing
Call for Papers
Signal Processing for XR Communications and Systems

Future wireless networks are expected to support ubiquitous extended reality (XR) with human-to-human communications. XR is a term that refers to all real-and-virtual combined environments and human-machine interactions generated by computer technology and wearables, where the 'X' represents any current or future spatial computing technology. XR especially includes augmented reality (AR), mixed reality (MR), and virtual reality (VR) that all are immersive on different levels, and have different levels of sensory inputs. The ultra-high resolution, detailed representation, panoramic scenery, and multi-stimuli of XR provide a unique immersive experience, allowing users to interact within an alternative world. Transmitting XR video, with its ultra-high bit rate and low latency, presents critical challenges to wireless networking. This special issue solicits high-quality original research papers on advanced signal processing schemes for XR communications and systems. Prospective authors are invited to submit original manuscripts on signal processing for XR communications and systems. Topics of interest include but are not limited to:

- Multiple-antenna technology for XR
- mmWave/Terahertz communications for XR
- Machine-learning-based XR transmissions
- Semantic communications for XR
- Energy-efficient technologies for XR communications
- Cross-layer design for XR communication systems
- Distributed processing for XR communication systems
- Circuit and hardware implementation aspects of XR communication systems

Prospective authors should submit their manuscripts following the IEEE JSTSP guidelines at https://signalprocessingsociety.org/publications-resources/information-authors. Authors should submit a PDF version of their complete manuscript to http://mc.manuscriptcentral.com/jstsp-ieee according to the following schedule:

Manuscript submission:	Deadline Extended: February 14, 2023
First notification:	Apr. 31, 2023
Revised manuscript:	Jun. 31, 2023
Second notification:	Aug. 15, 2023
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