

Call for Papers
IEEE Signal Processing Society
IEEE Journal of Selected Topics in Signal Processing

Special Issue on Signal Processing in Cooperative Cognitive Radio Systems

Dynamic Spectrum Access brings an emerging paradigm shift in improving spectrum utilization significantly from the conventional exclusive allocation and usage of spectrum resource. It allows secondary unlicensed users to dynamically share the spectrum with primary licensed users without affecting the regular utilization of spectrum in the primary systems. Cognitive radio has become one important technology to promote dynamic spectrum access by opportunistically sensing and exploiting the spectrum “holes”. Meanwhile cooperative relay technology brings another paradigm shift in wireless communication and signal processing by defining a new form of cooperative diversity through distributed transmission and processing with node collaboration. In the context of cognitive radio system, cooperative transmission is envisioned to bring new direction and dimension to dramatically improve the spectrum utilization and efficiency at the same time. This special issue aims at bringing innovative contribution and state-of-art research progress focusing on the signal processing aspects of dynamic spectrum access, interplay between cooperative transmission and cognitive radio technologies.

We invite original and unpublished research contributions in all areas relevant to signal processing in cooperative cognitive radio systems. The topics of interest include, but are not limited to:

- Cooperative spectrum sensing and detection algorithms
- Cooperative dynamic spectrum access (DSA) techniques
- Cooperative transmission and relay in cognitive radio systems
- Adaptive modulation and coding for cognitive radios
- Synchronization in distributed cooperative transmissions
- Distributed sensing and data fusion
- Cross-layer PHY/MAC optimization for cooperative DSA systems
- Stochastic optimization for delay-sensitive applications

Prospective authors should visit <http://www.signalprocessingsociety.org/publications/periodicals/jstsp/> for information on paper submission. Manuscripts should be submitted using the Manuscript Central system at <http://mc.manuscriptcentral.com/jstsp-ieee>. Manuscripts will be peer reviewed according to the standard IEEE process.

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