

# EURASIP Journal on Wireless Communications and Networking

## Special Issue on Recent Advances in Optimization Techniques in Wireless Communication Networks

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Future wireless networks and communication systems face many challenges arising from the interference among co-existing networks, high data rate and reliability demands of new applications and services, and adoption of new technologies like cooperative relaying, MIMO and cognitive radio. These new challenges together with the classical limitations of bandwidth and power, time-varying nature of the channel and network conditions, as well as the application demands for seamless operation and robustness lead to a very complicated engineering problem. On the other hand, advances in the field of optimization have led to promising techniques that can be utilized to tackle above challenges. Robust optimization, mixed discrete and continuous algorithms, distributed and sparse optimization are just some of the fields which have recently provided new techniques to settle some of the open problems in wireless networks and communications. The goal of this special issue is to gather recent research contributions and advances in optimization with applications in wireless networks and communications. The topics of interest include, but are not limited to:

- ▶ Sparse optimization methods in communications
- ▶ Biologically-inspired optimization methods in communications
- ▶ Mixed discrete and continuous optimization methods for wireless networks
- ▶ Robust optimization techniques in wireless networks
- ▶ Distributed optimization methods in networks
- ▶ Low complexity optimization algorithms for implementation in wireless networks
- ▶ Advances in optimized transceiver design
- ▶ Optimization methods for resource allocation in wireless networks
- ▶ Parameter estimation in communications
- ▶ Cross-layer optimization
- ▶ Optimization methods for cooperative communication and relaying
- ▶ Optimization of cognitive radio systems
- ▶ Optimization methods for self organizing networks
- ▶ Energy efficiency optimization for green communications
- ▶ Optimal design of energy harvesting wireless systems
- ▶ QoS optimization for multimedia networks

## Submission Schedule

- ▶ **Manuscript Due:**  
February 15, 2012
- ▶ **First Round of Reviews:**  
May 15, 2012
- ▶ **Publication Date:**  
August 15, 2012

## Submission Instructions:

Before submission authors should carefully read over the Instructions for Authors, which are located at [jwcn.eurasipjournals.com/authors/instructions](http://jwcn.eurasipjournals.com/authors/instructions). Prospective authors should submit an electronic copy of their complete manuscript through the SpringerOpen submission system at [jwcn.eurasipjournals.com/manuscript](http://jwcn.eurasipjournals.com/manuscript) according to the submission schedule. They should choose the correct Special Issue in the “sections” box upon submitting. In addition, they should specify the manuscript as a submission to the “Special Issue on Recent Advances in Optimization Techniques in Wireless Communication Networks” in the cover letter. All submissions will undergo initial screening by the Guest Editors for fit to the theme of the Special Issue and prospects for successfully negotiating the review process.

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