

CALL FOR PAPERS
IEEE Journal on Selected Areas in Communications
LARGE-SCALE MULTIPLE ANTENNA WIRELESS SYSTEMS

Large-scale multiple antenna wireless systems with hundreds of low-power antennas, that may be co-located at a base station site, spread out on the face of a building, or distributed geographically, provide a plethora of advantages over conventional MIMO and cooperative networks. In particular, these large-scale systems offer higher data rates, increased link reliability, and potential power savings since the transmitted RF energy can be more sharply focused in space while many random impairments (e.g. thermal noise and intercell interference) can be averaged out. Equally importantly, the analysis of large-scale systems can be carried out using tools from random matrix theory which has recently attracted considerable research interest. Despite these major advantages, there are several issues that need to be theoretically (e.g. capacity limits, power allocation strategies, signal transmission, channel estimation, and amount of feedback) and practically (e.g. antenna design, compensation of mutual coupling and spatial correlation) addressed.

This J-SAC special issue is devoted to Large-Scale Multiple Antenna Wireless Systems. High quality technical papers reporting on original theoretical results or applications of large MIMO or distributed wireless systems are solicited. Of particular interest is the following, non exclusive, list of topics:

- Information theoretic issues of large-scale multiple antenna wireless systems
- Distributed large-scale antenna systems and large-scale multicell/network MIMO systems
- Random matrix theory and large-system analysis of wireless communication systems
- Energy-efficient feedback reduction, power allocation and signal processing algorithms
- Beamforming, precoding, and space-time coding schemes
- Algorithm design for signal transmission and channel estimation/synchronization
- Propagation measurements and channel modeling
- Antenna design and effects of electromagnetic mutual coupling
- Experimental demonstrations, tests, and performance characterization of large-scale wireless systems

Prospective authors should prepare their submissions in accordance with the submission rules specified in the 'Information for Authors' section of the JSAC guidelines (<http://www.jsac.ucsd.edu/Guidelines/info.html>). Prior to submitting their papers for review, authors should make sure that they understand and agree to adhere to the over-length page charge policy presented in the JSAC guidelines. Papers should be submitted through EDAS (<http://www.edas.info>) according to the following timetable:

Manuscript submission:	January 15, 2012
First reviews complete:	June 1, 2012
Second reviews complete/acceptance letters sent:	August 15, 2012
Final to publisher:	October 1, 2012
Publication:	First quarter 2013

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