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Important dates

Submission Deadline

(extended):

January 31, 2012

First-Round Notification:

April 30, 2012

Notification of Acceptance:

June 15, 2012

Final Paper Due:

July 15, 2012

Call for Papers

A Special Issue of Physical Communication on “Multiuser MIMO Communications in Interference-Limited Scenarios”

Multiple-Input Multiple-Output (MIMO) systems represent the key technology for the development of future generation wireless communication systems. The presence of multiple antennas brings multiple beneficial effects including improved reliability, larger capacity, and enhanced coverage. These benefits can be further exploited together with multiuser diversity gain in MultiUser MIMO (MU-MIMO) systems.

To further enhance the performance of wireless communication systems in terms of power efficiency and/or system throughput, various system architectures and advanced signal processing techniques are continuously proposed and investigated for both uplink (multiple access channel) and downlink (broadcast channel) transmission. In particular, the following three scenarios are receiving significant interest from research initiatives: cooperative networks, in which base stations from different cells cooperate to act as a large virtual base station; dense networks (femtocells), in which end users will be placing access points available to other users otherwise served by the base station; and massive antenna array networks, in which base stations are equipped with a large number of cheap antennas. In all these intrinsically interference-limited scenarios, MU-MIMO plays a fundamental role to combat, mitigate, or even annihilate the detrimental effect of interference by benefiting from the features of multi-antenna systems in various forms. Deeper insights on the MU-MIMO potentials require the exploration of multifold directions spanning from channel sounding and modeling to cooperation and cross-layer design via resource allocation, etc. Meanwhile, a comprehensive understanding of the general system architecture, that can effectively explore all the beneficial effects of MU-MIMO in such interference-limited environments, is still lacking.

The main purpose of this special issue is to present high-quality unpublished papers addressing the related problems associated with both the uplink and downlink transmission of MU-MIMO systems. Submission of both theoretical- and/or practical-oriented works within this general field is solicited.

For more information
www.elsevier.com/computerscience



About the Topics of Interest

In particular, the topics of interest include but are not limited to

- **Adaptive modulation and limited-feedback communications**
- **Capacity and large-system analysis**
- **Channel sounding and modeling**
- **Cooperation and cross-layer issues**
- **Precoding, decoding, and distributed space-time coding**
- **Resource allocation and interference management**
- **Synchronization and channel estimation**
- **Transceiver design and performance analysis**
- **Standardization issues**

Submission Format and Guideline

All submitted papers must be clearly written in excellent English and contain only original work, which has not been published by or is currently under review for any other journal or conference. Papers must not exceed 25 pages (one-column, at least 11pt fonts) including figures, tables, and references. A detailed submission guideline is available as “Guide to Authors” at www.elsevier.com/locate/phycom.

All manuscripts and any supplementary material should be submitted through Elsevier Editorial System (EES). The authors must select “SI – MU-MIMO” when they reach the “Article Type” step in the submission process. The EES website is located at: <http://ees.elsevier.com/phycom/>

All papers will be peer-reviewed by three independent reviewers. Requests for additional information should be addressed to the guest editors.