

## Call for Papers

### IEEE Communications Magazine -- Call for Papers

#### Feature Topic:

#### Advances in Signal Processing for Wireless and Wired Communications

The recent years have witnessed an impressive growth in the definition and deployment of new communication technologies and services, in the areas of both wireless and wired communication systems. Among those, third-generation (3G) wireless cellular systems, wireless personal, local and metropolitan area networks (802.11 (WiFi), 802.15, 802.16 (WiMAX), etc.), emerging wireless sensor networks, ADSL2+ and VDSL2-based digital subscriber lines are but a few examples. Other technologies are currently being developed that will pave the way for the introduction of future services or the extension of existing ones, based for example on fourth-generation (4G) cellular systems, cognitive radio systems, pervasive wireless sensor networks, power line communication systems, etc.

In all these applications, signal processing stands out as a key technology enabler. To achieve and maintain this role, however, requires sustained innovation in areas as diverse as signal modulation and transmission, reception and detection, channel analysis, transmission system and channel optimization, transceiver architecture and hardware design, etc. In particular, the prospect of operating the systems close to their Shannon-capacity limits, as enabled by the invention of capacity-achieving coding and decoding techniques, poses unprecedented challenges for the design and implementation of highly robust and reliable signal-processing functions. Significant amount of research and development activities are currently taking place in the industry and academia to make the required technological advances possible.

This Feature Topic is devoted to original survey and tutorial articles on recent advances in signal processing for communications, including theoretical, algorithmic and implementation perspectives. Authors are invited to submit unpublished original articles that are not under review in any other conference or journal. Topics of interest include, but are not limited to, the following subject categories:

- adaptive and diversity transmission techniques
- processing and precoding for MIMO systems
- turbo processing techniques
- array processing and beamforming techniques
- distributed signal detection and distributed algorithms
- channel estimation and tracking
- synchronization
- equalization, interference cancellation
- optimization techniques
- spectrum management and spectrum access
- power efficient signal processing techniques for ad hoc and sensor networks

The communication systems addressed may include, but are not limited to 3G and 4 G wireless cellular systems, wireless ad-hoc and sensor networks, wireless PANs, LANs and WANs,

cognitive radio systems, ultra-wide-band communication systems, digital subscriber lines, and powerline communication systems.

### **Submission Guidelines**

***Articles should be tutorial in nature and written in a style comprehensible to readers outside the specialty of the article.*** Authors must follow the IEEE Communications Magazine's guidelines for preparation of the manuscript. Complete guidelines for prospective authors can be found at [www.comsoc.org/pubs/commag/sub\\_guidelines.html](http://www.comsoc.org/pubs/commag/sub_guidelines.html). It is very important to note that the IEEE Communications Magazine strongly limits mathematical content. Authors must therefore follow a style that keeps such content to a minimum, as specified in the guidelines, and strive for a tutorial exposition of the problems and their solutions. All articles to be considered for publication must be submitted through the IEEE Manuscript Central (<http://commag-ieee.manuscriptcentral.com>).

### **Schedule**

|                             |                 |
|-----------------------------|-----------------|
| Submission Deadline:        | May 1, 2008     |
| Notification of Acceptance: | August 1, 2008  |
| Final Manuscript Due:       | October 1, 2008 |
| Publication Date:           | January 1, 2009 |

### **Guest Editors**

Sedat Ölçer  
IBM Zurich Research Lab  
Rueschlikon, Switzerland  
oel@zurich.ibm.com

Mehmet Keskinöz  
Sabanci University  
Istanbul, Turkey  
keskinöz@sabanciuniv.edu

Hamid Sadjadpour  
University of California at Santa Cruz  
Santa Cruz, CA, USA  
hamid@soe.ucsc.edu