



ACADEMY PUBLISHER
<http://www.academypublisher.com/>

CALL FOR PAPERS
Journal of Communications (JCM, ISSN 1796-2021)
<http://www.academypublisher.com/jcm/>

Special Issue on Blind Signal Processing for Communications

In wireless communications, blind signal processing plays an important role in combating frequency-selective fading and inter-symbol interference (ISI). Blind channel estimation, blind equalization and blind detection are widely used for communication applications. Blind channel estimation can be based on very few or no training information to acquire the channel state information from the received signal. On the other hand, blind deconvolution can serve as a means to extract the continuously transmitted signal directly from the received signal instead. Blind detection can recover the transmitted information symbol without the explicit a priori knowledge of the received data. While classical estimation/equalization/detection methods for communication systems require the transmission of known signals (training sequences), untrained or blind approaches reach beyond this severe limitation and are therefore preferable from an efficiency (throughput) point of view. In addition, independent component analysis (ICA), blind source separation (BSS), constant modulus algorithm (CMA) and higher-order statistics (HOS) facilitate the promising tools for the blind signal processing which can be applied for antenna arrays, beamformers and MIMO systems. There still exist several drawbacks which need to be tackled in this field. For instance, the required data is usually very large for blind signal processing; the convergence speed is difficult to analyze and the convergence is difficult to maneuver as well. These disadvantages prevent these blind signal processing methods in communications from the practical use. Hence, we encourage peer scholars to contribute new concepts, ideas and algorithms to revitalize blind signal processing for a broader applicability in the next generation communication technology.

The aim of this special issue is to *bring together the state-of-the-art research contributions that address the major opportunities and challenges of blind signal processing enabled wireless communications and networking, with the emphasis on new analytical techniques, innovative efficient algorithms, and novel application scenarios*. Topics of interests include (but are not limited to):

- Blind equalization
- Semi-blind estimation
- Blind channel shorting
- Blind detection methods
- Multirate (or subband) techniques
- Second-order statistics (SOS)
- Blind adaptive algorithms
- Blind signal extraction (BSE)
- Higher-order statistics (HOS)
- Source number estimation method
- Independent component analysis (ICA)
- Nonlinear blind source separation
- Second-order cyclo-stationary statistics
- Blind identification of MIMO channel
- Blind estimation of transmission power
- Blind channel estimation for MIMO-OFDM Systems
- Constant modulus algorithms (CMA) for blind channel equalization
- Blind decision feedback equalization algorithm for wireless channels
- Source estimation method based on power spectral density (PSD)

Important Dates:

Prospective authors should comply with the submission guidelines (see below) according to the following timetable:

Manuscript Submission Due:	September 1th, 2009 (5 pm USA Eastern Standard Time)
Acceptance Notification:	January 1th, 2010
Final Manuscript Due:	January 31th, 2010
Tentative Publication Date:	2nd Quarter, 2010

Submission:

Submitted papers must be original and not have been previously published or currently submitted for journal publication elsewhere. Papers, which have appeared previously in proceedings of conferences, could be submitted to this special issue if they are substantially revised or improved from their earlier versions with at least 30% of new materials. A submitted paper should be no longer than 14 pages or not exceed 12,000 words, with main text of 10-point font in single-spaced two-column format. Latex users can use IEEETran class as the formatting template (from IEEE website). The above-mentioned page limit includes all figures, tables, references, etc.

Details should refer to the official JCM submission instruction at Academy Publisher site <http://www.academypublisher.com/jcm/forauthors.html>. Only electronic submissions in PDF are accepted via EasyChair system, with a cover page providing:

1. Title of the paper;
2. Names, email addresses, contact information, and affiliations of all authors (please identify the corresponding author);
3. Explanation on the differences between the journal submission and previous conference version (if any);
4. Confirmation that all co-authors have read and agreed with the instructions at <http://www.academypublisher.com/forauthors.html>. In particular, authors of accepted papers need to pay publication charges under the Open Access publication model.

Please direct all questions to the Email address: jcm.si.bspc.editors@gmail.com.

Guest Editors:

Hsiao-Chun Wu (wu@ece.lsu.edu)

Associate Professor
Department of Electrical and Computer Engineering
Louisiana State University
Baton Rouge, Louisiana, USA

Tho Le-Ngoc (tho.le-ngoc@mcgill.ca)

Professor, Fellow of IEEE
Department of Electrical and Computer Engineering
McGill University
Montreal, Quebec, Canada

Jitendra K. Tugnait (tugnajk@eng.auburn.edu)

Professor, Fellow of IEEE
Department of Electrical and Computer Engineering
Auburn University
Auburn, Alabama, USA

Shih-Yu Chang (shihyuch@cs.nthu.edu.tw)

Assistant Professor
Department of Computer Science
National Tsing Hua University
HsingChu, Taiwan