

IEEE

# SIGNAL PROCESSING LETTERS

A PUBLICATION OF THE IEEE SIGNAL PROCESSING SOCIETY



[www.ieee.org/sp/index.html](http://www.ieee.org/sp/index.html)

FEBRUARY 2016

VOLUME 23

NUMBER 2

ISPLEM

(ISSN 1070-9908)

---

## LETTERS

Dictionary Learning for Blind One Bit Compressed Sensing .....	<i>H. Zayyani, M. Korki, and F. Marvasti</i>	187
High Resolution Direct Position Determination of Radio Frequency Sources .....	<i>T. Tirer and A. J. Weiss</i>	192
Clustering Steganographic Modification Directions for Color Components .....	<i>W. Tang, B. Li, W. Luo, and J. Huang</i>	197
Two-band Radial Postfiltering in Cepstral Domain with Application to Speech Synthesis .....	<i>D. Erro</i>	202
Gauss-Legendre Sampling on the Rotation Group .....	<i>Z. Khalid, S. Durrani, R. A. Kennedy, Y. Wiaux, and J. D. McEwen</i>	207
ACE - An Effective Anti-forensic Contrast Enhancement Technique ...	<i>H. Ravi, A. V. Subramanyam, and S. Emmanuel</i>	212
An RLS-Based Lattice-Form Complex Adaptive Notch Filter .....	<i>R. Zhu, F. Yang, and J. Yang</i>	217
Robust Edge-Stop Functions for Edge-Based Active Contour Models in Medical Image Segmentation .....	<i>A. Pratondo, C.-K. Chui, and S.-H. Ong</i>	222
Heart Rate Tracking using Wrist-Type Photoplethysmographic (PPG) Signals during Physical Exercise with Simultaneous Accelerometry .....	<i>M. Boloursaz Mashhadi, E. Asadi, M. Eskandari, S. Kiani, and F. Marvasti</i>	227
Quality Assessment for Reassembled Image Files .....	<i>X. Wu, Q. Han, and X. Niu</i>	232
Supervised Monaural Speech Enhancement Using Complementary Joint Sparse Representations .....	<i>Y. Luo, G. Bao, Y. Xu, and Z. Ye</i>	237
Graph-based Dequantization of Block-Compressed Piecewise Smooth Images .....	<i>W. Hu, G. Cheung, and M. Kazui</i>	242
A Semi-Closed Form Solution to MIMO Relaying Optimization With Source-Destination Link .....	<i>H. Shen, W. Xu, and C. Zhao</i>	247

(Contents Continued on Page 184)

IEEE SIGNAL PROCESSING LETTERS (ISSN 1070-9908) is published quarterly in print and monthly online by the Institute of Electrical and Electronics Engineers, Inc. Responsibility for the contents rests upon the authors and not upon the IEEE, the Society/Council, or its members. **IEEE Corporate Office:** 3 Park Avenue, 17th Floor, New York, NY 10016-5997. **IEEE Operations Center:** 445 Hoes Lane, Piscataway, NJ 08854-4141. **NJ Telephone:** +1 732 981 0060. **Price/Publication Information:** Individual copies: IEEE Members \$20.00 (first copy only), nonmembers \$340.00 per copy. (Note: Postage and handling charge not included.) Member and nonmember subscription prices available upon request. Available in microfiche and microfilm. **Copyright and Reprint Permissions:** Abstracting is permitted with credit to the source. Libraries are permitted to photocopy for private use of patrons, provided the per-copy fee indicated in the code at the bottom of the first page is paid through the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923. For all other copying, reprint, or republication permission, write to Copyrights and Permissions Department, IEEE Publications Administration, 445 Hoes Lane, Piscataway, NJ 08854-4141. Copyright © 2016 by the Institute of Electrical and Electronics Engineers, Inc. All rights reserved. **Postmaster:** Send address changes to IEEE SIGNAL PROCESSING LETTERS, IEEE, 445 Hoes Lane, Piscataway, NJ 08854-4141. GST Registration No. 125634188. CPC Sales Agreement #40013087. Return undeliverable Canada addresses to: Pitney Bowes IMEX, P.O. Box 4332, Stanton Rd., Toronto, ON M5W 3J4, Canada. IEEE prohibits discrimination, harassment and bullying. For more information visit <http://www.ieee.org/nondiscrimination>. Printed in U.S.A.

Voice Activity Detection: Merging Source and Filter-based Information .....	252
..... <i>T. Drugman, Y. Stylianou, Y. Kida, and M. Akamine</i>	
Hough Forest-based Association Framework with Occlusion Handling for Multi-Target Tracking .....	257
..... <i>J. Xiang, N. Sang, J. Hou, R. Huang, and C. Gao</i>	
Simplified MMSE Precoding Design in Interference Two-Way MIMO Relay Systems .....	262
..... <i>K. X. Nguyen, Y. Rong, and S. Nordholm</i>	
Two Distributions Designed to Minimize the Expected Delay in CSMA Networks .....	267
..... <i>M. Fauß and A. M. Zoubir</i>	
On the Numerical Instability of an LCMV Beamformer for a Uniform Linear Array .....	272
..... <i>S. Chakrabarty and E. A. P. Habets</i>	
Near Orthogonal Oversampled Graph Filter Banks .....	277
..... <i>D. B. H. Tay, Y. Tanaka, and A. Sakiyama</i>	
Partial FFT Demodulation for MIMO-OFDM Over Time-Varying Underwater Acoustic Channels .....	282
..... <i>J. Han, L. Zhang, and G. Leus</i>	
Complex and Quaternionic Principal Component Pursuit and Its Application to Audio Separation .....	287
..... <i>T.-S. T. Chan and Y.-H. Yang</i>	
Relay Power Control for Two-Way Full-Duplex Amplify-and-Forward Relay Networks .....	292
..... <i>Y. Li, N. Li, M. Peng, and W. Wang</i>	
Accurate Changing Point Detection for $\ell_1$ Mean Filtering .....	297
..... <i>J. Ottersten, B. Wahlberg, and C. R. Rojas</i>	
On Predicting Visual Comfort of Stereoscopic Images: A Learning to Rank Based Approach .....	302
..... <i>Q. Jiang, F. Shao, W. Lin, and G. Jiang</i>	

---