

# IEEE TRANSACTIONS ON IMAGE PROCESSING

A PUBLICATION OF THE IEEE SIGNAL PROCESSING SOCIETY



[www.signalprocessingsociety.org](http://www.signalprocessingsociety.org)

Indexed in PubMed® and MEDLINE®, products of the United States National Library of Medicine



JULY 2015

VOLUME 24

NUMBER 7

IIPRE4

(ISSN 1057-7149)

## PAPERS

Progressive Halftone Watermarking Using Multilayer Table Lookup Strategy .....	<i>J.-M. Guo, G.-H. Lai, K. Wong, and L.-C. Chang</i>	2009
Hierarchical Graphical Models for Simultaneous Tracking and Recognition in Wide-Area Scenes .....	<i>N. M. Nayak, Y. Zhu, and A. K. Roy Chowdhury</i>	2025
Spatial Coherence-Based Batch-Mode Active Learning for Remote Sensing Image Classification .....	<i>Q. Shi, B. Du, and L. Zhang</i>	2037
Motion-Compensated Coding and Frame Rate Up-Conversion: Models and Analysis .....	<i>Y. Dar and A. M. Bruckstein</i>	2051
Face Recognition Across Non-Uniform Motion Blur, Illumination, and Pose .....	<i>A. Punnappurath, A. N. Rajagopalan, S. Taheri, R. Chellappa, and G. Seetharaman</i>	2067
Beyond Perspective Dual Photography With Illumination Masks .....	<i>S. J. Koppal and S. G. Narasimhan</i>	2083
Fractal Analysis for Reduced Reference Image Quality Assessment .....	<i>Y. Xu, D. Liu, Y. Quan, and P. Le Callet</i>	2098
Density Maximization for Improving Graph Matching With Its Applications .....	<i>C. Wang, L. Wang, and L. Liu</i>	2110
Matching of Large Images Through Coupled Decomposition .....	<i>P. Sidiropoulos and J.-P. Muller</i>	2124
Robust Representation and Recognition of Facial Emotions Using Extreme Sparse Learning .....	<i>S. Shojaeilangari, W.-Y. Yau, K. Nandakumar, J. Li, and E. K. Teoh</i>	2140

(Contents Continued on Page 2002)

IEEE TRANSACTIONS ON IMAGE PROCESSING (ISSN 1057-7149) is published monthly 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 \$529.00 per copy. (Note: Postage and handling charge not included.) Member and nonmember subscription prices available upon request. Available in print, electronic, and CD-ROM. **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 of \$31.00 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 © 2014 by the Institute of Electrical and Electronics Engineers, Inc. All rights reserved. **Postmaster:** Send address changes to IEEE TRANSACTIONS ON IMAGE PROCESSING, 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.

---

Swarm Intelligence for Detecting Interesting Events in Crowded Environments .....	2153
..... <i>V. Kaltsa, A. Briassouli, I. Kompatsiaris, L. J. Hadjileontiadis, and M. G. Strintzis</i>	
Adaptive Image Denoising by Targeted Databases .....	2167
..... <i>E. Luo, S. H. Chan, and T. Q. Nguyen</i>	
PM-PM: PatchMatch With Potts Model for Object Segmentation and Stereo Matching .....	2182
..... <i>S. Xu, F. Zhang, X. He, X. Shen, and X. Zhang</i>	
Online Temporally Consistent Indoor Depth Video Enhancement via Static Structure .....	2197
..... <i>L. Sheng, K. N. Ngan, C.-L. Lim, and S. Li</i>	
Full-Space Local Topology Extraction for Cross-Modal Retrieval .....	2212
..... <i>L. Zhang, Y. Zhang, R. Hong, and Q. Tian</i>	
Machine Learning-Based Coding Unit Depth Decisions for Flexible Complexity Allocation in High Efficiency Video Coding .....	2225
..... <i>Y. Zhang, S. Kwong, X. Wang, H. Yuan, Z. Pan, and L. Xu</i>	
Blind Inpainting Using $\ell_0$ and Total Variation Regularization .....	2239
..... <i>M. V. Afonso and J. M. R. Sanches</i>	
Sorted Consecutive Local Binary Pattern for Texture Classification .....	2254
..... <i>J. Ryu, S. Hong, and H. S. Yang</i>	
A Source-Channel Coding Approach to Digital Image Protection and Self-Recovery .....	2266
..... <i>S. Sarreshtedari and M. A. Akhaee</i>	

---