

2016 International Conference on Wavelet Analysis and Pattern Recognition (ICWAPR 2016)

**Jeju Island, South Korea
10 – 13 July 2016**



**IEEE Catalog Number: CFP1619C-POD
ISBN: 978-1-5090-2918-1**

**Copyright © 2016 by the Institute of Electrical and Electronics Engineers, Inc
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

******This publication is a representation of what appears in the IEEE Digital Libraries. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP1619C-POD
ISBN (Print-On-Demand):	978-1-5090-2918-1
ISBN (Online):	978-1-5090-2917-4
ISSN:	2158-5695

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

Contents

Organizing Committee	III
-----------------------------------	-----

Program Committee	V
--------------------------------	---

List of Reviewers	VI
--------------------------------	----

Contributed Papers

A GLASS IMAGE CLASSIFICATION METHOD BASED ON MULTI-FEATURE FUSION LIANG ZHANG, JING WEN, SHENG-ZHOU XU, HAO-YANG XING, YU ZHU, HENG-XIN CHEN	7
USING K-NN WITH WEIGHTS TO DETECT DIABETES MELLITUS BASED ON GENETIC ALGORITHM FEATURE SELECTION TING SHU, BOB ZHANG, Y. Y. TANG	12
UNSUPERVISED FEATURE SELECTION BY NONNEGATIVE SPARSITY ADAPTIVE SUBSPACE LEARNING NAN ZHOU, HONG CHENG, YA-LI ZHENG, LIANG-TIAN HE, WITOLD PEDRYCZ.....	18
AUTOMATIC DECISION SUPPORT BY RULE EXHAUSTION DECISION TREE ALGORITHM RUN ZONG LIU, BIN FANG, HUI WU LUO	25
MULTIPLE CLASSIFIER SYSTEM WITH DYNAMIC WEIGHTING BASED ON SENSITIVITY FOR EMG BASED HAND GESTURE RECOGNITION WENGENG HUANG, PATRICK P. K. CHAN, DALIN ZHOU, YINFENG FANG, HONGHAI LIU, DANIEL S. YEUNG.....	31
SYNTAXTREE ALIGNER: A WEB-BASED PARALLEL TREE ALIGNMENT TOOLKIT JUNWEN XING, DEREK F. WONG, LIDIA S. CHAO, ANA LU'ISA V. LEAL, MA'RCIA SCHMALTZ, CHUNHUI LU	37
NO-INFERENCE IMAGE SHARPNESS ASSESSMENT BASED ON WAVELET AND IMAGE SALIENCY MAP HENG-JUN ZHAO	43
A NEW MULTIPLICATIVE NOISE REMOVAL MODEL COMBINING CARTOON-TEXTURE DECOMPOSITION METHOD CHEN-PING ZHAO, XIANG-CHU FENG, WEI-WEI WANG, ZHAO-WEI OUYANG, HUA-ZHU CHEN	49
LOCATION BAGGING-BASED UNDERSAMPLING FOR IMBALANCED CLASSIFICATION PROBLEMS TONGWEN RONG, XING TIAN, WING W. Y. NG	72

RESEARCH ON DIRECTIONAL AND DISTANCE QUERY ALGORITHM BASED ON MOIS-TREE	
HONG-RU SUN, RUN-TAO LIU	78
L1-NORM BASED RECONSTRUCTION ERROR EVALUATION FOR HUMAN ACTION RECOGNITION ACTION RECOGNITION	
BO LIN, BIN FANG, WEI-BIN YANG	90
EXPLOITING RICH FEATURE REPRESENTATION FOR SMT N-BEST RERANKING	
YU TONG, DEREK F. WONG, LIDIA S. CHAO	101
CONSIDERATION OF COMPOSING METHOD OF THE OPTIMIZED REAL-SIGNAL MOTHER WAVELET	
ZHONG ZHANG, JUNJI SUZUKI, TAKUMA AKIDUKI, TETSUO MIYAKE	107
HIGH FLEXIBLE ORTHONORMAL BASIS OF WAVELETS AND ITS HILBERT TRANSFORM PAIR	
HIROSHI TODA, ZHONG ZHANG	134
LOGARITHMIC UNCERTAINTY PRINCIPLE FOR QUATERNION LINEAR CANONICAL TRANSFORM	
MAWARDI BAHRI, RYUICHI ASHINO	140
MULTI-SUBGRAPH MATCHING FOR LOGO LOCALIZATION USING GENETIC ALGORITHM	
PENG-FEI WANG, YA-LI ZHENG, HONG CHENG, NAN ZHOU	146
DIRECT METHOD-GREENS THEORY: FROM PDE TO BIE IN THE GEOMETRIC TRANSFORMATION	
LI-NA YANG, TAO-SHEN LI, YUAN YAN TANG, JIA XU	157
AN IMPROVED PARALLEL THINNING ALGORITHM	
JIANWEI DONG, WUHONG LIN, CHAO HUANG	162
BACKGROUND REMOVAL AND VESSEL ENHANCEMENT OF LOW QUALITY FUNDUS IMAGE USING MATCHED FILTER COMBINED WITH MATHEMATICAL MORPHOLOGY	
CHENGYU LU, BINGZHONG JING, PATRICK P.K. CHAN, DAOMAN XIANG, WANHUA XIE, JIANXUN WANG, DANIEL S. YEUNG	168
ADAPTIVE WEIGHTED ORTHOGONAL MATCHING PURSUIT FOR ROBUST PATTERN CLASSIFICATION	
YU-LONG WANG, YUAN YAN TANG, LI-NA YANG	174
HEP-2 CELL IMAGE CLASSIFICATION USING LOCAL FEATURES AND K-MEANS CLUSTERING BASED JOINT SPARSE REPRESENTATION	
XIANDE ZHOU, YUEXIANG LI, WENFENG WU, LINLIN SHEN	179
CLASSIFICATION OF IMAGERY MOTOR EEG DATA WITH WAVELET DENOISING AND FEATURES SELECTION	
LEI SUN, ZU REN FENG	184
OPTIMUM WAVELET FILTER ESTIMATING PEAK LATENCIES OF AUDITORY BRAINSTEM RESPONSE WAVEFORM	
NOBUKO IKAWA, AKIRA MORIMOTO, RYUICHI ASHINO	189
SMART VIDEO ACCESS CONTROL SYSTEM WITH HYBRID FEATURES IN COMPLICATED ENVIRONMENT	
WEIWEN LIU, ZHI-MIN HE	201
SHILLING ATTACK DETECTION IN COLLABORATIVE FILTERING RECOMMENDER SYSTEM BY PCA DETECTION AND PERTURBATION	
ZI-JUN DENG, FEI ZHANG, SANDRA P.S. WANG	213
INCREMENTAL LEARNING BASED ON BLOCK SPARSE KERNEL NONNEGATIVE MATRIX FACTORIZATION	

WEN-SHENG CHEN, YUGAO LI, BINBIN PAN, BO CHEN.....	219
BRIDGE FLOOR CRACKS DETECTION BY USING THE 2 DIMENSIONAL COMPLEX DISCRETE WAVELET PACKET TRANSFORM	
ZHONG ZHANG, OHZORA HAMADA, HIROSHI TODA, TAKUMA AKIDUKI, TETSUO MIYAKE.....	225
SIMULTANEOUS MULTIPHASE IMAGE SEGMENTATION AND CARTOON-TEXTURE DECOMPOSITION	
HUA-ZHU CHEN, WEI-WEI WANG, CHEN-PING ZHAO, HUA HUANG.....	230
HYPERSPECTRAL IMAGE CLASSIFICATION USING DISTANCE METRIC BASED 1-DIMENSIONAL MANIFOLD EMBEDDING	
HUI-WU LUO, YU-LONG WANG, YUAN YAN TANG, CHUN-LI LI, JIAN-ZHONG WANG	247
CAM-SHIFT TARGET TRACKING APPROACH BASED ON BACK PROJECTION METHOD WITH DISTANCE WEIGHTS	
WEI HU, YUQIU SUN, XIONG LI, YUANXIANG JIANG, MEICHEN YU	252
DIRECTIONAL REDUNDANT POLYPHASE TRANSFORMS	
KENSUKE FUJINOKI, KEITA ASHIZAWA	258
POINTER-TYPE METER AUTOMATIC READING FROM COMPLEX ENVIRONMENT BASED ON VISUAL SALIENCY	
LIN ZHANG, BIN FANG, XING ZHAO, HONG-SUO ZHANG	264
IMAGE QUALITY DEGRADATION ASSESSMENT BASED ON THE DUAL-TREE COMPLEX DISCRETE WAVELET TRANSFORM FOR EVALUATING DIGITAL IMAGE WATERMARKING	
HAJIME OMURA, TERUYA MINAMOTO	270
GABOR PHASE REPRESENTATION ON HUMAN FACE RECOGNITION FOR DISTORTED IMAGES	
BRUCE POON, M. ASHRAFUL AMIN, HONG YAN	276