

# **2016 International Conference on Audio, Language and Image Processing (ICALIP 2016)**

**Shanghai, China  
11 – 12 July 2016**



**IEEE Catalog Number: CFP1650D-POD**  
**ISBN: 978-1-5090-0655-7**

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

IEEE Catalog Number:	CFP1650D-POD
ISBN (Print-On-Demand):	978-1-5090-0655-7
ISBN (Online):	978-1-5090-0654-0

**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](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

# Table of Contents

Monday, July 11, 2016

---

<b>Oral Session I</b>	
<b>Audio and Music Processing, Big Data and Cloud Processing</b>	
<b>1</b>	<b>VIRTUAL MACHINE MIGRATING BASED ON MARKOW CHAIN</b> Jian Zhang, Caixin Zhu, Shengbo Chen, Xianyang Liu, Hongguang Du <i>School of Computer Engineering and Science, Shanghai University, Shanghai 200444, P. R. China</i>
<b>7</b>	<b>2.5D INTERIOR/EXTERIOR SOUND FIELD REPRODUCTION AND ITS EXTENSION TO NARROWBAND SPEECH SIGNALS</b> Wenbei Wang, Maoshen Jia, Changchun Bao, Jiaming Zhang <i>Speech and Audio Signal Processing Laboratory, School of Electronic Information and Control Engineering, Beijing University of Technology, Beijing 100124, China</i>
<b>13</b>	<b>DCSPARK:VIRTUALIZING SPARK USING DOCKER CONTAINERS</b> Zhou Lei, Hongguang Du, Shengbo Chen, Caixin Zhu, Xianyang Liu <i>School of Computer Engineering and Science, Shanghai University, Shanghai 200436, P. R. China</i>
<b>19</b>	<b>A 600BPS MELP VOCODER WITH VOICE ACTIVITY DETECTION</b> Qiuyun Hao, Ye Li, Peng Zhang, Yanhong Fan, Xiaofeng Ma, Jingsai Jiang <i>Shandong Provincial Key Laboratory of Computer Networks, Shandong Computer Science Center (National Supercomputer Center in Jinan), Jinan, China</i>
<b>24</b>	<b>AN ENVIRONMENT ADAPTIVE LOUDSPEAKER CALIBRATION METHOD FOR AMBISONICS DECODING SYSTEM</b>
	Zhichao Huang, Shan Gao, Tianshu Qu, Liang Li, Xihong Wu <i>Key Laboratory on Machine Perception (Ministry of Education), Speech and Hearing Research Center, Peking University, Beijing, China</i>
<b>28</b>	<b>IMPROVING SPARK PERFORMANCE WITH MPTE IN HETERO-GENEOUS ENVIRONMENTS</b> Hongbin Yang, Xianyang Liu, Shenbo Chen, Zhou Lei, Hongguang Du, Caixin Zhu <i>School of Computer Engineering and Science, Shanghai University, Shanghai 200436, P. R. China</i>
<b>34</b>	<b>SCENE RECOGNITION ALGORITHM BASED ON MULTI-FEATURE AND WEIGHTED MINIMUM DISTANCE CLASSIFIER FOR DIGITAL HEARING AIDS</b> Ruwei Li, Senior Member, IEEE and IET, Shuang Zhang, Xiaoqun Yi <i>College of Electronic Information and Control Engineering, Beijing University of Technology, Beijing 100124, China</i>

---

<b>Oral Session II</b>	
<b>Computer Graphics and Virtual Reality, Audio and Music Processing</b>	
<b>40</b>	<b>3D DESIGN TOOLS FOR EQUIPMENT MANUFACTURING AND EXHIBITION BASED ON INTERNET</b> Feng Tian <sup>1</sup> , Pan Wang <sup>1</sup> , ChunYan Dong <sup>1</sup> , Jie Gao <sup>1</sup> , Haifeng Tang <sup>2</sup> , Li Qian <sup>2</sup> , Haojun Xu <sup>1</sup> <i>1. Shanghai Film Academy, Shanghai University, Shanghai 200072, China</i> <i>2. No.2511 Gonghe Xin Road, State Grid Shanghai Shibei Electric Power Supply, Shanghai, China</i>

---

- 47 **RESEARCH ON SPA-BASED TARGET ACOUSTIC SIGNAL TREND TERM REMOVAL**  
Ding Kai, Li Hao, Zhu Yichao, Qiu Shuang  
*Science and Technology on Near-Surface Detection Laboratory, Wuxi 214035, China*
- 51 **REAL-TIME RENDERING FOR REALISTIC HUMAN SKIN ON WEB-SIDE**  
Mengting Yu, Fuyan Liu  
*School of Computer Engineering and Science, Shanghai University, Shanghai 200444, P. R. China*
- 57 **SPATIAL SOUNDFIELD RECORDING USING COMPRESSED SENSING TECHNIQUES**  
Jian-hong Pan, Chang-chun Bao, Bing Bu and Mao-shen Jia  
*Speech and Audio Signal Processing Laboratory, School of Electronic Information and Control Engineering, Beijing University of Technology, Beijing 100124, China*
- 62 **THE ANALYSIS METHOD OF VIDEO CAMERA'S MOTION BASED ON OPTICAL FLOW AND SLAM**  
Pan Wang, Chen Chen, Chunyan Dong, Haojun Xu, Feng Tian  
*Shanghai Film Academy, Shanghai University, Shanghai 200072, China*
- 67 **LIGHT RE-RENDERING TECHNOLOGY BASED ON IMAGE BRIGHTNESS RATIO**  
Dan Li, Ling Yuan, Dongdong Hu, Yingsong Hu, Junda Liu  
*School of Computer Science & Technology, Huazhong University of Science and Technology Wuhan, 430074, China*
- 72 **AN ACCURATE DECORRELATION METHOD FOR PARAMETRIC STEREO CODING**  
Tianshu Qu, Qingbo Huang, Yichao Huang, Liang Li, Xihong Wu  
*Key Laboratory on Machine Perception (Ministry of Education), Speech and Hearing Research Center, Peking University, Beijing, China*

---

**Poster Session I**  
**Audio and Music Processing, Big Data and Cloud Processing, Computer Graphics and Virtual Reality**

---

- 77 **MOVIE AUDIO SCENE RECOGNITION BASED ON WFST**  
Jichen Yang<sup>1,2</sup>, Min Cai<sup>2</sup>, Yanxiong Li<sup>2</sup>, Hai Jin<sup>2</sup>  
*1.School of Information Science and Technology, Zhongkai University of Agriculture and Engineering*  
*2.School of Electronic and Information Engineering, South China University of Technology, Guangzhou*
- 81 **DESIGN OF POWER SUPPLY FOR PORTABLE ACOUSTIC SHOCK ACQUISITION SYSTEM**  
Chen Guo, Shi Junchao  
*Science and Technology on Near-Surface Detection Lab., Wuxi 214035, Jiangsu, China*
- 85 **A DECISIONS FUSION AND TARGET CLASSIFICATION RULE FOR UNATTENDED GROUND SENSORS**  
Rong Ying-Jiao, Qian Han-Ming  
*Science and Technology on Near-Surface Detection Laboratory, Wuxi 214035, Jiangsu, China*
- 89 **EMBEDDED SYSTEM DESIGN FOR AUTOMATIC SCREENING OF SNORE DURING NOCTURNAL AUDIO RECORDING**  
Limin Hou, Qiang Pan, Chen Wang  
*School of Communication and Information Engineering, Shanghai University, Shanghai*
- 95 **INFLUENCE OF THE NUMBER OF LOUDSPEAKERS ON THE TIMBRE IN HORIZONTAL AMBISONICS REPRODUCTION**  
Mai Haiming, Jiang Jianliang, Xie Bosun, Rao Dan, Liu Yang  
*Acoustic lab, School of Physics and Optoelectronics, South China University of Technology, Guangzhou, China*

- 100 REAL-TIME SPEECH COMMUNICATION SYSTEM BASED ON OPTIMIZED G.723.1**  
Guoliang Chen, Wanggen Wan, Kang Han, Haoyu Chen  
*School of Communication & Information Engineering, Shanghai University, Shanghai, China; Institute of Smart City, Shanghai University, 200444, Shanghai, China*
- 106 THE DESIGN OF ACCESS CONTROL SYSTEM BASED ON AUDIO TOKEN**  
Yangyang Sha, Wanggen Wan, Zhongbin Li, Deke Kong, Haoyu Chen  
*School of Communication & Information Engineering, Shanghai University, Shanghai, China; Institute of Smart City, Shanghai University, 200444, Shanghai, China*
- 111 RESEARCH AND DESIGN OF THE FUTURE CLASSROOM BASED ON BIG DATA AND CLOUD PROCESSING**  
Lijuan Zhu  
*Informational Technology dept. Shanghai Jianqiao University, Shanghai, China*
- 115 RESEARCH OF TAX ASSESSMENT BASED ON IMPROVED FUZZY NEURAL NETWORK**  
Jingjing Wang<sup>1,2</sup>, XiaoQing Yu<sup>1,2</sup>, Pengfei Li<sup>1,2</sup>  
*1.School of Communication and Information Engineering, Shanghai University, China, 200444;*  
*2.Institute of Smart City, Shanghai University, Shanghai 200444, China*
- 120 THE RESEARCH AND APPLICATION OF TAX RISK IDENTIFICATION BASED ON PSO-BP ALGORITHM**  
Jingjing Wang<sup>1,2</sup>, XiaoQing Yu<sup>1,2</sup>, Pengfei Li<sup>1,2</sup>, Jie Xia<sup>1,2</sup>  
*1.School of Communication and Information Engineering, Shanghai University, China, 200444*  
*2.Institute of Smart City, Shanghai University, Shanghai 200444, China*
- 126 DESIGN AND IMPLEMENTATION OF INDOOR POSITIONING SYSTEM BASED ON IBEACON**  
XiangJie Li, Dan Xu, Xuzhi Wang, Rizwan Muhammad  
*School of Communication & Information Engineering, Shanghai University, Shanghai, China; Institute of Smart City, Shanghai University, 200444, Shanghai, China*
- 131 JAVA WEB LOGIN AUTHENTICATION BASED ON IMPROVED MD5 ALGORITHM**  
Linxia Zhong, Wanggen Wan, Deke Kong  
*School of Communication & Information Engineering, Shanghai University, Shanghai, China; Institute of Smart City, Shanghai University, 200444, Shanghai, China*
- 136 A HIGHER-ORDER FINITE-DIFFERENCE TIME-DOMAIN METHOD FOR SOUND PROPAGATION**  
Wuqiong Huang, Yigang Lu  
*School of Architecture, South China University of Technology, Guangzhou, China*
- 141 APPLICATION OF MULTISPECTRAL REMOTE SENSING TECHNOLOGY IN SURFACE WATER BODY EXTRACTION**  
Zhang Ding, Ni Qi, Fang Dong, Li Jinhui, Yao Wei, Yuan Shenggui  
*Science and Technology on Near-Surface Detection Laboratory, Wuxi 214035, China*
- 145 THE APPLICATION OF WEB3D IN THE TEACHING OF EQUIPMENT MAINTENANCE TRAINING**  
Haojun Xu<sup>1</sup>, Chen Chen<sup>1</sup>, Feng Tian<sup>1</sup>, Haifeng Tang<sup>2</sup>, Li Qian<sup>2</sup>  
*1.No.149 Yanchang Road, Shanghai Film Academy, Shanghai University, Shanghai, China*  
*2.No. 2511 Gonghe Xin Road, State Grid Shanghai Shibei Electric Power Supply Company, Shanghai, China*

**150 RESEARCH AND APPLICATION OF DYNAMIC AND INTERACTIVE DATA VISUALIZATION BASED ON D3**

Lianjun Chen<sup>1</sup>, Hongbo Zhou<sup>2</sup>  
*1.School of Information Technology, Shanghai Jianqiao University, Shanghai, 201306, China*  
*2.Department of Computer Science, Slippery Rock University, Slippery Rock, PA 16057, USA*

**156 THE SIMULATION OF BUILDING ESCAPE SYSTEM BASED ON UNITY3D**

Qiyun Sun, Wanggen Wan, Xiaoqing Yu  
*School of Communication and Information Engineering; Institute of Smart City, Shanghai University, Shanghai, China*

**161 AN AUTOMATIC SKINNING METHOD FOR REAL-TIME DEFORMATION**

Guoliang Chen, Wanggen Wan, Kang Han  
*School of Communication and Information Engineering; Institute of Smart City, Shanghai University, Shanghai, China*

**166 ADAPTABLE P2P PANORAMIC VIDEO STREAMING SYSTEM BASED ON WEBRTC AND WEBGL**

Zhenhua Hao  
*Shanghai Jian Qiao University, Shanghai, China*

**170 PROGRESSIVE COMPRESSION AND TRANSMISSION OF 3D MODEL WITH WEBGL**

Pengfei Li, Xiaoqing Yu, Jingjing Wang  
*School of Communication and Information Engineering, Institute of Smart City, Shanghai University, Shanghai, China*

**174 TIME SERIES MINING BASED ON MULTILAYER PIECEWISE AGGREGATE APPROXIMATION**

Zhenghui Zhu<sup>1</sup>, Renhan Cai<sup>2</sup>, Xiaojian Cui<sup>2</sup>, Lingyu Xu<sup>1</sup>, Yunlan Xue<sup>1</sup>, Gaowei Zhang<sup>1</sup>, Lei Wang<sup>1</sup>, Xiang Yu<sup>1</sup>  
*1.School of Computer Engineering and Science, Shanghai University NO. 99, Shangda Road, Shanghai, 200444, P. R. China*

*2.National Marine Information Center NO.93, Liuwei Road, Tianjin, 3000171, P. R. China*

**180 DYNAMIC PASSWORD TOKEN BASED ON SM3 ALGORITHM**

Deke Kong, Xuzhi Wang, Linxia Zhong, Yangyang Sha, Zhongbin Li  
*School of Communication and Information Engineering, Shanghai University, China*  
*Institute of Smart City, Shanghai University, 200444, China*

---

**Oral Session III**

**Audio and Music Processing, Image and Video Processing**

---

**185 IMPROVEMENTS IN HRTF DATASET OF 3D GAME AUDIO APPLICATION**

Ruixing Wu, Guangzheng Yu  
*Acoustic Lab, School of Physics and Optoelectronics, South China University of Technology, Guangzhou, China*

**191 VISUAL TRACKING VIA LOCAL PATCHES AND CONTEXTUAL INFORMATION**

Hua Bao, Zonghai Chen  
*Department of Automation, University of Science and Technology of China, Hefei, China*

**197 ANALYSIS ON THE INFLUENCE OF NUMBER OF LOUD-SPEAKERS ON THE ERROR IN BINARUAL PRESSURE SPECTRA FOR SPATIAL AMBISONICS REPRODUCTION**

Jiang Jianliang, Mai Haiming, Xie Bosun, Rao Dan, Liu Yang  
*Acoustic lab, School of Physics and Optoelectronics, South China University of Technology, Guangzhou, China*

**202 MUSIC BOUNDARY DETECTION WITH MULTIPLE FEATURES**

Weiyao Xue, Shutao Sun, Fengyan Wu, Yongbin Wang  
*Communication University of China Beijing, China*

**208 A PRECISE EVALUATION METHOD OF PROSODIC QUALITY OF NON-NATIVE SPEAKERS USING AVERAGE VOICE AND PROSODY SUBSTITUTION**

Hafiyah Prafianto, Takashi Nose, Akinori Ito

*Department of Communications Engineering, Graduate School of Engineering, Tohoku University*

**213 MULTI-FEATURE FUSION BASED RE-RANKING FOR PERSON RE-IDENTIFICATION**

Saeed ur Rehman, Zonghai Chen, Jamal Hussain Shah, Mudassar Raza

*Department of Automation, University of Science and Technology of China, Hefei, Anhui, P.R China*

**217 VIDEO-BASED ADAPTIVE RAILWAY RECOGNITION IN COMPLEX SCENE**

Xiang Qiang, Zhaoyang Zhang, Qiwei Chen, Cheng Wu, Yiming Wang

*School of Urban Rail Transportation, Soochow University, Suzhou 215100, China*

---

**Oral Session IV  
Image and Video Processing**

---

**223 COMPUTER VIRTUAL RECONSTRUCTION OF A THREE DIMENSIONAL SCENE IN INTEGRAL IMAGING**

Min Guo<sup>1</sup>, Yu-juan Si<sup>1,2</sup>, Shi-gang Wang<sup>1</sup>, Yuan-zhi Lyu<sup>3</sup>, Bo-wen Jia<sup>1</sup>, and Wei Wu<sup>1</sup>

*1.College of Communication Engineering, Jilin University, Changchun, China*

*2.Department of Electronic Information Science and Technology, Zhuhai College of Jilin University, Zhuhai, China*

*3. Photoelectric Technology Research and Development Center, Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Science, Changchun, China*

**229 SUPER-RESOLUTION IMAGE RECONSTRUCTION USING A**

**TWO-DIMENSIONAL SUBGRADIENT ALGORITHM**

Youshen Xia, Wanqiu Xie, and Quanbin Shi

*College of Mathematics and Computer Science, Fuzhou University, Fuzhou, China*

**235 ABNORMAL BEHAVIOR DETECTION USING CONDITIONAL RANDOM FIELDS**

Ben-Syuan Huang<sup>1</sup>, Shih-Chung Hsu<sup>1</sup> and Chung-Lin Huang<sup>2</sup>

*1.Electrical Engineering Department, National Tsing-Hua University, Hsin-Chu, Taiwan*

*2.Dept. of M-Commerce and Multimedia Applications, Asia University, Taichung, Taiwan*

**241 BOOSTING IMAGE RETRIEVAL FRAMEWORK WITH SALIENT OBJECTS**

Jianwei Sun<sup>1</sup>, Junfeng Wu<sup>1</sup>, Hong Yu<sup>1</sup>, Xinnian Wang<sup>2</sup>, Meiling Zhang<sup>1</sup>, Lingqiao Jiang<sup>2</sup>

*1.College of Information Engineering, Dalian Ocean University, Dalian, China, 116023*

*2.School of Information Science and Technology, Dalian Maritime University, Dalian, China, 116023*

**246 IMAGE PROCESSING OF CEMENT-BASED MATERIALS IN CONDITIONS OF CURRENT FLOW FOR MICROSTRUCTURAL ANALYSIS**

Jiangping Hu<sup>1</sup>, A. Susanto<sup>2</sup>, D.A. Koleva<sup>2,3</sup>

*1.School of Mechanical Engineering, Wuhan Polytechnic University, Wuhan, 430023, PR China*

*2.Faculty of Civil Engineering and Geosciences, Delft University of Technology, Section of Materials and Environment, Stevinweg 1, 2628 CN Delft, The Netherlands*

*3.Curtin University of Technology, Faculty of Science and Engineering, Department of Chemical & Petroleum Engineering, GPO Box U1987, Perth, WA, Australia*

**251 NON-RIGID POINT SET REGISTRATION USING**

**MULTI-FEATURE AND GAUSSIAN MIXTURE MODEL**

Su Zhang<sup>1</sup>, Yang Yang<sup>1,2</sup>

1. *School of Information Science and Technology, Yunnan Normal University Kunming, 650092, China*

2. *The Engineering Research Center of GIS Technology in Western China of Ministry of Education of China, Yunnan Normal University, Kunming, 650092, China*

**Tuesday, July 12, 2016**

---

**Oral Session V  
Image and Video Processing**

---

**263 MOVING OBJECT DETECTION BASED ON BACKGROUND DICTIONARY**

Hua-sheng Zhu, Jun Wang, Chen-guang Xu, and Jun Ye

*School of Information Engineering, Nanchang Institute of Technology, Nanchang 330099, China*

**268 NON-RIGID POINT SET REGISTRATION WITH MULTIPLE FEATURES**

HaoLin Tang<sup>1,2</sup>, Yang Yang<sup>1,2</sup>

1. *School of Information Science and Technology, Yunnan Normal University Kunming, 650092, China*

2. *The Engineering Research Center of GIS Technology in Western China of Ministry of Education of China, Yunnan Normal University, Kunming, 650092, China*

**274 ROBUST OBJECT TRACKING VIA SPARSE REPRESENTATION BASED ON COMPRESSIVE**

**COLLABORATIVE HAAR-LIKE FEATURE SPACE**

ZHAO Ming, QIAN Han-ming, Rong Ying-jiao, CHEN Guo

*Science and Technology on Near-Surface Detection Laboratory, Wuxi 214035, Jiangsu, China*

**257 DETAIL-PRESERVING FIDELITY REFINEMENT FOR TONE MAPPING**

Zhifeng Xie, Sheng Du, Dongjin Huang, Youdong Ding

*Shanghai Film Academy, Shanghai University, Shanghai 200072, China*

**279 NON-RIGID IMAGE REGISTRATION FOR VISIBLE COLOR AND THERMAL IR FACE**

Yang Yang

*School of Information Science and Technology, Yunnan Normal University Kunming, 650092, China; The Engineering Research Center of GIS Technology in Western China of Ministry of Education of China, Yunnan Normal University, Kunming, 650092, China*

**285 OIL DEPOTS DETECTION FROM HIGH RESOLUTION REMOTE SENSING IMAGES BASED ON SALIENT REGION EXTRACTION**

Chaoyang Li, Hong Huo and Tao Fang  
*Department of Automation, Shanghai Jiao Tong University, Shanghai, China*

**289 AN IMPROVED ARTIFICIAL BEE COLONY ALGORITHM FOR RANGE IMAGE REGISTRATION**

Xiao Lu, Taifeng Li, Liang Gao, Haobo Qiu

*The State Key Laboratory of Digital Manufacturing Equipment and Technology, Huazhong University of Science & Technology, Wuhan, China*

---

**Oral Session VI  
Image and Video Processing**

---

**295 CORRUPTED OLD FILM SEQUENCES RESTORATION USING IMPROVED PATCHMATCH AND LOW-RANK MATRIX RECOVERY**

Bing Yu, Youdong Ding, Xi Huang, Bing Wu

*Shanghai Film Academy, Shanghai University, Shanghai 200072, China*



- 301 A SMOKE DETECTION ALGORITHM BASED ON K-MEANS SEGMENTATION**  
 Dr. Manish Shrivastava<sup>1</sup>, Princy Matlani<sup>2</sup>  
*1.Head Of Department (CSE) Guru Ghasidas University, koni, Bilaspur (C.G), India*  
*2.Ph.D Scholar, Guru Ghasidas University, koni, Bilaspur (C.G), India*
- 306 SUPERVISED FEATURE LEARNING NETWORK BASED ON THE IMPROVED LLE FOR FACE RECOGNITION**  
 Dan Meng<sup>1</sup>, Guitao Cao<sup>1,2</sup>, Wenming Cao<sup>2,3</sup>, Zhihai He<sup>2</sup> IEEE fellow  
*1. School of Computer Science and Software Engineering, East China Normal University, 3663 Zhongshan North Road, Shanghai, China*  
*2. Computer Science Department, University of Missouri, MO65211, USA*  
*3. College of Information Engineering, Shenzhen University, Shenzhen 518060, China*
- 312 AN ADAPTIVE FAST ALGORITHM BASED ON VARIANCE FOR AVS2**  
 Li Zeng, Fan Liang, Liwei Xie  
*School of Electronics and Information Technology, Sun Yat-sen University, Guangzhou 510275, PRC*
- 318 ADAPTIVE DEPTH MAP-BASED RETINEX FOR IMAGE DEFOGGING**  
 Jun Liu<sup>1</sup>, Jinxiu Zhu<sup>1,2</sup>, Ying Pei<sup>1</sup>, Yao Zhang<sup>1,2</sup>  
*1.College of Internet of Things Engineering Hohai University, Changzhou 213022, China*  
*2.Changzhou key laboratory of Sensor Networks and Environmental Perception Changzhou 213022, China*
- 323 SEQUENCY-ORDERED GENERALIZED WALSH-FOURIER TRANSFORM BASED SHAPE DESCRIPTION AND RETRIEVAL**  
 Guoqing Xu  
*School of Computer and Information Engineering, Nanyang Institute of Technology, Nanyang, China*

---

**Poster Session II**  
**Image and Video Processing**

---

- 327 ESD CHARACTERISTICS OF GGNMOS DEVICE IN DEEP SUB-MICRON CMOS TECHNOLOGY**  
 SHI JUN  
*Shanghai Jianqiao University, Shanghai, China*
- 332 RATE-DISTORTION ANALYSIS FOR COMPRESSIVE SENSING BASED CODING**  
 Wei Jiang, Junjie Yang  
*School of Electronics and Information Engineering, Shanghai University of Electric Power, Shanghai200090, China*
- 336 TEXT LINE SEGMENTATION USING VITERBI ALGORITHM FOR THE PALM LEAF MANUSCRIPTS OF DAI**  
 Ge Peng, Pengfei Yu, Haiyan Li and Lesheng He  
*School of Information Science and Engineering, Yunnan University, Yunnan, China*
- 341 3D FACIAL RECONSTRUCTION OF BASED ON OPENCV AND DIRECTX**  
 Jing Yin, XiaoFang Yang  
*College of Information Technology, Shanghai Jianqiao University, Shanghai, China*
- 345 RESEARCH AND IMPLEMENTATION OF INTRUSION DETECTION ALGORITHM IN VIDEO SURVEILLANCE**  
 Jin-xiang Wang  
*IIP Lab. Department of Computer Science and Technology, Yanbian University, Yanji, Jilin, China*
- 349 RESEARCH OF VEHICLE SPEED DETECTION ALGORITHM IN VIDEO SURVEILLANCE**  
 Jin-xiang Wang  
*IIP Lab. Department of Computer Science and Technology, Yanbian University, Yanji, Jilin, China*

- 353 COMPRESSIVE-SIGNAL ANNOTATION DRIVEN BY A SUPER-VISED TOPIC-CLUSTERING BOF MODEL**  
 Jianyan Zheng, Lihong Ma, Xiaoer Wang  
*School of Electronic and Information Engineering, South China University of Technology, Guangzhou, China, 510641*
- 357 THE RETRIEVAL OF THE CERAMIC PRODUCTIONS BASED ON THE PAIRWISE GEOMETRIC HISTOGRAM**  
 PENG Yongkang, ZHANG Yilai  
*College of the information engineering, Jingdezhen Ceramic Institute, 333000*
- 361 WATERMARKING ALGORITHM OF SPATIAL DOMAIN IMAGE BASED ON SVD**  
 Zhang Nana  
*College of Information Technology, Shanghai Jian Qiao University, Shanghai, China. 201306*
- 366 TFT-LCD UNEVEN BRIGHTNESS CORRECTION AND RECOGNITION OF MURA AREA BASED ON EMD METHOD**  
 Ziwei Zhu, Xiang Qian<sup>1</sup>, Qian Zhao, Qian Zhou, Kai Ni, Xiaohao Wang<sup>2</sup>  
*1. Graduate School at Shenzhen, Tsinghua University, Shenzhen, China, 518055*  
*2. The Research Institute of Tsinghua University in Shenzhen, Shenzhen, China, 518055*
- 370 MULTI-TARGET TRACKING BY DETECTION**  
 Qiaoling Zeng, Gongjian Wen, Dongdong Li  
*Science and Technology on Automatic Target Recognition Laboratory, National University of Defense Technology, Changsha, China*
- 375 DETECTION OF WOOD SURFACE DEFECTS BASED ON PARTICLE SWARM-GENETIC HYBRID ALGORITHM**  
 Zhen-Nan KE<sup>1</sup>, Qi-Jie ZHAO<sup>1,2</sup>, Chun-Hui HUANG<sup>1</sup>, Pu AI<sup>1</sup>, Jin-Gang YI<sup>3</sup>  
*1. School of Mechatronic Engineering and Automation, Shanghai University, Shanghai 200072, China*  
*2. Shanghai Key Laboratory of Intelligent Manufacturing and Robotics, Shanghai 200072, China*  
*3. Department of Mechanical and Aerospace Engineering, Rutgers University, Piscataway, NJ 08854, United States*
- 380 AN EFFICIENT FRAMEWORK FOR LOSSLESS COLOR IMAGE COMPRESSION**  
 Zhikui Luo, Yi Wan  
*School of Information Science and Engineering, Lanzhou University, Lanzhou, China*
- 385 COMPARISON OF SPARSE-VIEW CT IMAGE RECONSTRUCTION ALGORITHMS**  
 Shu Zhang, Youshen Xia, Changzhong Zou  
*College of Mathematics and Computer Scienc, Fuzhou University, Fuzhou, China*
- 391 STUDY FOR IMAGE OPTIMAL FILTER BASED ON NEURAL NETWORK**  
 Mack Jianhua Du<sup>1</sup>, Wilson Y. Wang<sup>2</sup>, Yajing Liu<sup>1</sup>  
*1. Shanghai Jianqiao University, Shanghai, China*  
*2. TOA (China) Co., Ltd., Shanghai, China*
- 395 MEDICAL IMAGE RETRIEVAL USING HIGH DIMENSIONAL INFORMATION GEOMETRY**  
 Fangfang Lyu, Yanan Zhang, Wenming Cao  
*Shenzhen Key Laboratory of Media Security, College of Information Engineering, Shenzhen University, Shenzhen, 518060*
- 399 DISTANCE AGGREGATION FOR PERSON RE-IDENTIFICATION USING SIMULATED ANNEALING ALGORITHM**  
 Kang Han, Wanggen Wan, Guoliang Chen, Li Hou  
*School of Communication and Information Engineering, Institute of Smart City, Shanghai University, Shanghai, China*

- 404 3D POINT CLOUD MATCHING BASED ON PRINCIPAL COMPONENT ANALYSIS AND ITERATIVE CLOSEST POINT ALGORITHM**  
Chi Yuan, Xiaoqing Yu, Ziyue Luo  
*School of Communication and Information Engineering, Institute of Smart City, Shanghai University, Shanghai, China*
- 409 PERSON RE-IDENTIFICATION USING MULTIPLE FEATURES FUSION**  
Kang Han, Wanggen Wan, Guoliang Chen, Li Hou  
*School of Communication and Information Engineering, Institute of Smart City, Shanghai University, Shanghai, China*
- 414 FACE RECOGNITION BASED ON LBPH AND REGRESSION OF LOCAL BINARY FEATURES**  
GAO Xiang, ZHU Qiuyu, WANG Hui, and CHEN Yan  
*School of Communication and Information Engineering, Shanghai University*
- 418 DESIGN AND IMPLEMENTATION OF ACCESS CONTROL MANAGEMENT SERVER**  
Zhongbin Li, Wanggen Wan, Yangyang Sha, Deke Kong, Haoyu Chen  
*School of Communication and Information Engineering, Shanghai University, China  
Institute of Smart City, Shanghai University, 200444, China*
- 423 SIX DIMENSIONAL CLUSTERING SEGMENTATION OF COLOR POINT CLOUD**  
Zhang Ximin<sup>1,2</sup>, Wan Wanggen<sup>1</sup>  
*1.School of Communication & Information Engineering, Institute of Smart City, Shanghai University, Shanghai, China  
2.Institute of Physics and Electronic Engineering, Henan Institute of Finance and Banking, Zhengzhou, China*
- 428 MODEL-GUIDED AND INERTIA-DRIVEN DIRECTIONAL MINI-MAL PATH FOR CORONARY CENTERLINE EXTRACTION**  
Liu Liu<sup>1</sup>, Ning Sun<sup>1</sup>, Xiahai Zhuang<sup>2</sup>  
*1.Nanjing University of Posts and Telecommunications, Nanjing, China  
2.SJTU-CU ICRC, School of NAOCE, Shanghai Jiao Tong University, China*
- 433 CONVEX HULL FOR VISUAL TRACKING WITH EMD**  
Jun Wang, Yuanyun Wang, Chengzhi Deng, Shengqian Wang, Huasheng Zhu  
*1.Jiangxi Province Key Laboratory of Water Information Cooperative Sensing and Intelligent Processing, Nanchang Institute of Technology, Nanchang 330099, China  
2.School of Information Engineering, Nanchang Institute of Technology, Nanchang 330099, China  
3. Research Laboratory of Cooperative Sensing and Advanced Computing Techniques, Nanchang Institute of Technology, Nanchang 330099, China*
- 438 IMAGE SEGMENTATION BASED ON PCNN MODEL COMBINED WITH AUTOMATIC WAVE AND SYNAPTIC INTEGRATION**  
Zhu Caihong<sup>1</sup>, Chen Shiyang<sup>2</sup>, Gao Jinyong<sup>1</sup>, Wang Xia<sup>1</sup>  
*1.Hebei University of Technology, Tianjin 300401, China  
2.Baoding Power Supply Branch, Hebei Electric Power Company, State Grid, Baoding071000, China*
- 442 ADAPTIVE ACOUSTIC MASKING BASED ON SPECTRAL ENVELOPE**  
Jiang Jingsai, Li Ye, Zhang Peng, Hao Qiuyun, Ma Xiaofeng, Fan Yanhong  
*Shandong Computer Science Center, Shandong Provincial Key Laboratory of Computer Network, Jinan, China*
- 447 RESEARCH ON IMAGE RETRIEVAL TECHNOLOGY BASED ON IMAGE FINGERPRINT AND COLOR FEATURES**  
Yaguang Wang<sup>1</sup>, Aina Sui<sup>1</sup>, Wenlong Fu<sup>2</sup>  
*1.School of Computer, Communication University of China*

---

**Oral Session VII**  
**Image and Video Processing**

---

2.Neuroscience and Intelligent Media  
Institute, Communication University of  
China, Beijing, China

Key Laboratory of Media Audio & Video  
(Communication University of China),  
Ministry of Education, Beijing, China

- 452 SUPER-RESOLUTION RECONSTRUCTION BASED ON STRUCTURE TENSOR'S EIGENVALUE AND CLASSIFICATION DICTIONARY**  
Jie Jiang, Junmei Yang, Ziyi Pan  
*School of Electronic and Information Engineering, South China University of Technology, Guangzhou 510641, China*

- 482 SPEAKER ROLE CLUSTERING USING TURN FEATURES AND MAXIMUM INTER-CLUSTER DISTANCES**  
Yanxiong Li<sup>1</sup>, Xue Zhang<sup>1</sup>, Xianku Li<sup>1</sup>, Aiwu Chen<sup>1</sup>, Jichen Yang<sup>1</sup>, Xiaohui Feng<sup>1</sup>, Qian Huang<sup>1</sup>, Zhuoming Chen<sup>2</sup>  
*1.School of Electronic and Information Engineering, South China University of Technology, China*  
*2.The First Affiliated Hospital of JINAN University, China*

---

**Oral Session VIII**  
**Image and Video Processing, Language and Speech Processing**

---

- 457 MODELING MOTION FLOW USING TENSOR DYNAMIC TEXTURES**  
Bingyin Zhou, Qingyun Ren, Ming Lu  
*College of Mathematics and Information Sciences, Hebei Normal University, Shijiazhuang 050024, China*
- 463 AN IMPROVED SPEECH ENHANCEMENT ALGORITHM BASED ON GENERALIZED SIDELobe CANCELLER**  
LI Bin<sup>1</sup>, ZHANG Ling-hua<sup>1,2</sup>  
*1.College of Telecommunication & Information Engineering, Nanjing University of Posts and Telecommunications, Nanjing 210003, China*  
*2. Jiangsu Engineering Research Center of Communication and Network Technology, Nanjing 210003, China*
- 469 AN EFFECTIVE KALMAN FILTERING METHOD FOR ENHANCING SPEECH IN THE PRESENCE OF COLORED NOISE**  
Youshen Xia and Qingquan Wei  
*College of Mathematics and Computer Science, Fuzhou University, Fuzhou, China*
- 475 ISOLATED CHINESE LYRICS WITH ACCOMPANIMENT RECOGNITION BASED ON SVM**  
Juanjuan Cai, Na Li, Hui Wang, Bing Zhu

- 487 THE EFFECTS OF LANGUAGE SIMILARITY ON BILINGUALS' SPEECH PRODUCTION**  
Zhanling Cui<sup>1</sup>, Xunbing Shen<sup>2</sup>  
*1.Department of psychology, Hebei Normal University*  
*2.College of Humanity, Jiangxi University of Traditional Chinese Medicine*

---

**Oral Session IX**  
**Language and Speech Processing, Social Network and Data Mining, Machine Learning and Smart Information Processing**

---

- 494 SPEECH ENHANCEMENT USING IMPROVED MAP ESTIMATION AND WIENER FILTER**  
Sarang Chehrehisa and Tom Moir  
*School of Engineering, Computer and Mathematical Sciences, Auckland University of Technology (AUT), St. Pauls street, Auckland, New Zealand*
- 499 A NOVEL I-VECTOR FRAMEWORK USING MULTIPLE FEATURES AND PCA FOR SPEAKER RECOGNITION IN SHORT SPEECH CONDITION**  
Chi Zhang<sup>1</sup>, Xiaoqiang Li<sup>1</sup>, Wei Li<sup>2,3</sup>, Peizhong Lu<sup>2</sup>, Wenqiang Zhang<sup>2,3</sup>  
*1.School of Computer Engineering and Science, Shanghai University, Shanghai, China*

2.School of Computer Science and Technology, Fudan University, Shanghai, China  
3.Shanghai Key Laboratory of Intelligent Information Processing, Fudan University, Shanghai, China

**504 FINANCIAL DATA DIVISION AND RULES MINING BASED ON INFLUENCE AND AP CLUSTERING**

Xiang Yu<sup>1</sup>, Xiaojian Cui<sup>2</sup>, Renhan Cai<sup>2</sup>, Lingyu Xu<sup>1</sup>, Lei Wang<sup>1</sup>, Yunlan Xue<sup>1</sup>  
1.School of Computer Engineering and Science, Shanghai University NO. 99, Shangda Road, Shanghai, 200444, P.R.China  
2.National Marine Information Center, NO.93, Liuwei Road, Tianjin, 3000171, P.R.China

**509 RESEARCH ON HVDC SINGLE-ENDED FAULT TRAVELING WAVE LOCATION METHOD BASED ON FASTICA**

Liu Yue  
School of Mechatronic and Information Engineering, China University of Mining & Technology (Beijing), Beijing, China

**515 A COLLABORATIVE FILTERING RECOMMENDATION BASED ON USERS' INTEREST AND CORRELATION OF ITEMS**

Feiyue Ye, Haolin Zhang  
School of Computer Engineering and Science, Shanghai University, Shanghai, China

**521 CONSTRUCTION OF BOTTLE-BODY AUTOENCODER AND ITS APPLICATION TO AUDIO SIGNAL CLASSIFICATION**

Jichen Yang<sup>1,2</sup>, Qianhua He<sup>2</sup>, Min Cai<sup>2</sup>, Yanxiong Li<sup>2</sup>, Hai Jin<sup>2</sup>  
1.School of Information Science and Technology, Zhongkai University of Agriculture and Engineering  
2.School of Electronic and Information Engineering, South China University of Technology, Guangzhou

**525 A NON-DATA-AIDED FREQUENCY OFFSET ESTIMATION ALGORITHM**

**OF TWO CO-FREQUENCY 16QAM SIGNALS**

Peiqiang Wang, Kai Liu  
Key Laboratory of Specialty Fiber Optics and Optical Access Networks, School of Communication and Information Engineering, Shanghai University, Shanghai, 200072, China

---

**Oral Session X**

**Social Network and Data Mining, Big Data and Cloud Processing, Machine Learning and Smart Information Processing**

---

**529 FORUM TOPIC DETECTION BASED ON HIERARCHICAL CLUSTERING**

Hui Li, Qing Li  
School of Computer Engineering and Science, Shanghai University, Shanghai 200444, China

**534 GESTURE RECOGNITION BASED ON PARALLEL HARDWARE NEURAL NETWORK IMPLEMENTED WITH STOCHASTIC LOGICS**

Xuechun Wang<sup>1</sup>, Wendong Chen<sup>1</sup>, Yuan Ji<sup>1,2</sup>, Feng Ran<sup>1,2</sup>  
1.Microelectronic Research and Development Center, Shanghai University, Shanghai 200072, China  
2.School of Mechatronic Engineering and Automation, Shanghai University, Shanghai 200072, China

**540 DESIGN OF HUMAN-ROBOT INTERACTIVE INTERFACE BASED ON IDENTITY RECOGNITION**

Pu AI<sup>1</sup>, Qi-Jie ZHAO<sup>1,2</sup>, Zhen-Nan KE<sup>1</sup>, Chun-Hui HUANG<sup>1</sup>, Jin-Gang YI<sup>3</sup>  
1. School of Mechatronic Engineering and Automation, Shanghai University, Shanghai 200072 China  
2.Shanghai Key Laboratory of Intelligent Manufacturing and Robotics, Shanghai 200072, China  
3.Department of Mechanical and Aerospace Engineering, Rutgers University, Piscataway, NJ 08854, United States

**546 OPTIMIZATION AND REALIZATION OF PARALLEL FREQUENT ITEM SET MINING ALGORITHM**  
Ling Yuan, Dan Li, Yuzhong Chen  
*School of Computer Science, Huazhong University of Science and Technology, Wuhan, 430074, China*

**552 L1-NORM MINIMIZATION FOR OCTONION SIGNALS**  
Rui Wang, Guijun Xiang, Fagan Zhang  
*School of Communication & Information Engineering, Shanghai University, Shanghai, China*

**557 THE NEW EYE OF SMART CITY: NOVEL CITIZEN SENTIMENT ANALYSIS IN TWITTER**  
Mengdi Li<sup>1</sup>, Eugene Ch'ng<sup>1</sup>, Alain Chong<sup>2</sup>, Simon See<sup>3</sup>  
*1.Big Data and Visual Analytics Lab, International Doctoral Innovation Centre, University of Nottingham Ningbo, China*  
*2.Nottingham University Business School, China*  
*3.Nvidia Asia Pacific and Japan Technology Centre, Singapore*

**563 PARALLEL CLUSTERING BY FAST SEARCH AND FIND OF DENSITY PEAKS**  
Ji Chengheng, Lei Yongmei  
*School of computer engineering and science, Shanghai University, Shanghai, China*

---

**Poster Session III**

**Image and Video Processing, Language and Speech Processing, Machine Learning and Smart Information Processing, Social Network and Data Mining**

---

**568 HUMAN ACTION RECOGNITION BASED ON KINECT AND PSO-SVM BY REPRESENTING 3D SKELETONS AS POINTS IN LIE GROUP**  
Dan Xu, Xiao Xiao, Xuzhi Wang, Jingjing Wang  
*School of Communication and Information Engineering, Institute of Smart City, Shanghai University, Shanghai, China*

**574 HUMAN DETECTION AND TRACKING OVER CAMERA NETWORKS: A REVIEW**  
Li Hou<sup>1,2,3</sup>, Wanggen Wan<sup>1,3</sup>, Kang Han<sup>1,3</sup>, Rizwan Muhammad<sup>1,3</sup>, Mingyang Yang<sup>1,3</sup>

*1.School of Communication and Information Engineering, Shanghai University, Shanghai 200444, China*  
*2.School of Information Engineering College, Huangshan University, Huangshan 245021, China*  
*3.Institute of Smart City, Shanghai University, Shanghai 200444, China*

**581 3D OBJECT RECOGNITION BASED ON SPCA-ALM IN CLUTTERED SCENES**  
Dan Xu, XiangJie Li, Xuzhi Wang, Jingjing Wang  
*School of Communication and Information Engineering, Institute of Smart City, Shanghai University, Shanghai, China*

**586 AN OPTIMIZED LICENSE PLATE RECOGNITION SYSTEM FOR COMPLEX SITUATIONS**  
Jianing Qiu, Naida Zhu, Yi Wei, Xiaoqing Yu  
*School of Communication and Information Engineering, Institute of Smart City, Shanghai University, Shanghai, China*

**591 AN EVENT EXTRACTION METHOD BY SEMANTIC ROLE ANALYSIS**  
Zhang Shun-rui, Xu Yu-qing, Zhou Xin-jian, Yue Hui, Zhu Xiao-wen  
*The First Engineers Scientific Research Institute, Wuxi 214035, China*

**596 MULTI-SOURCE LOCALIZATION BASED ON APPROXIMATED KERNEL DENSITY ESTIMATOR AND SPATIAL LIKELIHOOD FUNCTION IN NEAR-FIELD REVERBERANT ENVIRONMENT**  
FANG Yu-zhuo, Xu Zhi-yong, ZHAO Zhao  
*School of Electronic Engineering and Optic-Electronic Technology, Nanjing University of Science and Technology, Nanjing 210094, China*

- 600 ANALYSIS OF STUDENT ACTIVITIES TRAJECTORY AND DESIGN OF ATTENDANCE MANAGEMENT BASED ON INTERNET OF THINGS**  
Zhongyun Jiang  
*Department of Information and Technology, Shanghai Jianqiao University, Shanghai, China*
- 604 A METHOD OF SINGLE CHANNEL BLIND SOURCE SEPARATION OF CO-FREQUENCY 16QAM SIGNALS**  
Zhu Wengui, Zhang Yuren  
1. Fifty-first Research Institute of China Electronic Technology Group Corporation  
2. Key Laboratory of Specialty Fiber Optics and Optical Access Networks, School of Communication and Information Engineering, Shanghai University, 200072, China
- 608 A MIC-BASED ACCELERATION MODEL OF DEEP LEARNING**  
Jianlei Zhang, Xumin Zheng, Wenfeng Shen, Dingqian Zhou, Feng Qiu, Huiran Zhang  
*School of Computer Engineering and Science, Shanghai University, Shanghai 200444, P. R. China*
- 615 RECOGNITION OF INDIVIDUAL OBJECT IN FOCUS PEOPLE GROUP BASED ON DEEP LEARNING**  
Liu Hui-bin, Wu Fei, Chen Qiang, Pan Yong  
*School of Electronic and Electrical Engineering, Shanghai University of Engineering Science, Shanghai 201620, China*
- 620 REQUIRE-DOCUMENTS AND PROVIDE-DOCUMENTS MATCHING ALGORITHM BASED ON TOPIC MODEL**  
Xiangwen zou, Yue wu, Zhongtian liu  
*School of Computer Engineering and Science, Shanghai University, Shanghai, China*
- 626 STUDY ON THE THREE TYPES OF COMPONENT REFINEMENT IN EOOPN**  
Na Zhao<sup>2</sup>, Jian Wang<sup>1</sup>, Zhongwen Xie<sup>2</sup>, Jinzhuo Liu<sup>2</sup>, Xue Sun<sup>2</sup>, Lei Zhang<sup>2</sup>, Zhendi Yang<sup>2</sup>  
1. College of Information Engineering and Automation, Kunming University of Science and Technology, China  
2. School of Software, Key Laboratory in Software Engineering of Yunnan Province, Yunnan University, Kunming, China
- 630 A NEW APPROACH OF CONSTRUCTING DECISION TREE BASED ON SHORTEST PATH METHODS**  
Ziyue Luo, Xiaoqing Yu, Chi Yuan  
*School of Communication and Information Engineering, Shanghai University, China; Institute of Smart City, Shanghai University, 200444, China*
- 635 PATH PLANNING ALGORITHM UNDER SPECIFIC CONSTRAINTS IN WEIGHTED DIRECTED GRAPH**  
Qiyun Sun, Wanggen Wan  
*School of Communication and Information Engineering, Institute of Smart City, Shanghai University, Shanghai, China*
- 641 THE NOVEL ALGORITHM OF BUS-CLUSTER PHENOMENON**  
Kai Yang, Wanggen Wan, Guoliang Chen  
*School of Communication and Information Engineering, Shanghai University, China; Institute of Smart City, Shanghai University, 200444, China*
- 646 OVERVIEW: VIDEO RECOGNITION FROM HANDCRAFTED METHOD TO DEEP LEARNING METHOD**  
Xiao Xiao, Dan Xu, Wanggen Wan  
*School of Communication and Information Engineering, Shanghai University, China; Institute of Smart City, Shanghai University, 200444, China*
- 652 DESIGN AND IMPLEMENTATION OF AN ELDERLY TRACKER SYSTEM**  
Xiangning Meng<sup>1</sup>, Rui Wang<sup>1</sup>, Xirui Li<sup>2</sup>  
1. School of Communication & Information Engineering, Shanghai University, Shanghai, China

2. *Shanghai Astronomical Observatory,  
Chinese Academy of Sciences, Shanghai  
200030, China*

**658 TWO-LEVEL-MIXING RUMOR  
PROPAGATION MODEL BASED ON  
DYNAMIC TRUST NETWORK**

Zuanjian Chen<sup>1</sup>, Weiqin Tong<sup>1</sup>, Samina  
Kausar<sup>1</sup> and Shengan Zheng<sup>2</sup>

1. *School of Computer Engineering and  
Science, Shanghai University, Shanghai,  
China*

2. *Department of Computer Science and  
Engineering, Shanghai Jiao Tong  
University, Shanghai, China*

**663 WIFI INDOOR LOCATION BASED  
ON K-MEANS**

Yazhou Zhong<sup>1,2</sup>, Fei Wu, Juan Zhang, Bo  
Dong

1. *Shanghai University of Engineering  
Science, School of Electronic and  
Electrical Engineering, Shanghai 201620,  
China*

2. *Shanghai Key Laboratory of Computer  
Software Evaluating & Testing, Shanghai  
200235, China*

**668 EXTRACTING TOPIC KEYWORDS  
FROM SINA WEIBO TEXT SETS**

Shucheng Xu, Juncai Guo, Xue Chen  
*School of Computer Engineering and  
Science, Shanghai University*

**771 A MULTISTAGE FILTERING FOR  
DETECTING GROUP IN THE  
CROWD**

Qian Zhao, Jie Shao, Yan Zhao  
*School of Electrical and Information  
Engineering, Shanghai University of  
Electric Power, Shanghai, China*

1. *School of Opto-electronic Information  
Science and Technology, Yantai University,  
Yantai, China*

2. *School of Computer and Control  
Engineering, Yantai University, Yantai,  
China*

**679 SPEECH SIGNAL FEATURE  
PARAMETERS EXTRACTION  
ALGORITHM BASED ON PCNN FOR  
ISOLATED WORD RECOGNITION**

WANG Guang-yan<sup>1</sup>, ZHANG Yi-ming<sup>1</sup>,  
SUN Mei-lin<sup>1</sup>, WANG Xia<sup>2</sup>, ZHANG Yan<sup>2</sup>

1. *School of Information Engineering,  
Tianjin University of commerce, Tianjin  
300134, China*

2. *School of Information Engineering,  
Hebei University of Technology, Tianjin  
300130, China*

**683 A SCHEME DISCRIMINATING  
BETWEEN SYNTHETIC SPEECH  
AND NORMAL SPEECH**

Jilun Chen, Weiqiang Zhang, Jia Liu  
*Department of Electronic Engineering,  
Tsinghua University, Beijing 100084,  
China*

**689 CORRECTION OF DISTORTION  
MASK SPEECH BASED ON  
PARAMETER ESTIMATION OF AR  
MODEL**

WANG Guang-yan<sup>1</sup>, ZHAO Chen-yu<sup>1</sup>,  
XUE Xiao-zhen<sup>1</sup>, ZHANG Jing<sup>1</sup>, ZHAO  
Xiao-qun<sup>2</sup>

1. *School of Information Engineering,  
Tianjin University of commerce, Tianjin  
300134, China*

2. *School of Electronics and Information  
Engineering, Tongji University, Shanghai,  
China*

**694 THE DESIGN ON INTELLIGENT  
PHYSICAL WARNING SYSTEM FOR  
FIREMAN**

Wentao Jiang<sup>1,2</sup>, Chang Chen<sup>2</sup>, and Yan  
Cai<sup>1,2</sup>

1. *Tianjin Key Laboratory of Advance  
Technology of Electrical Engineering and  
Energy*

2. *Tianjin Polytechnic University, Tianjin  
300387, China*

---

**Oral Session XI**  
**Language and Speech Processing, Remote**  
**Sensing and GIS**

---

**674 SPEECH ENHANCEMENT USING A  
GEOMETRIC DECISION- DIRECTED  
APPROACH**

Shifeng Ou<sup>1</sup>, Wei Liu<sup>1</sup>, Peng Song<sup>2</sup>, and  
Ying Gao<sup>1</sup>



- 699 REMOTE SENSING IMAGES REGISTRATION WITH DIFFERENT VIEWPOINTS**  
Anning Pan<sup>1,2</sup>, Yang Yang<sup>1,2</sup>  
*1. School of Information Science and Technology, Yunnan Normal University Kunming, 650092, China*  
*2. The Engineering Research Center of GIS Technology in Western China of Ministry of Education of China, Yunnan Normal University, Kunming, 650092, China*
- 705 COARSE-TO-FINE SHIP DETECTION USING VISUAL SALIENCY FUSION AND FEATURE ENCODING FOR OPTICAL SATELLITE IMAGES**  
Yingying Yin, Na Liu, Chaoyang Li, Weibing Wan, and Tao Fang  
*Department of Automation, Shanghai Jiao Tong University, Shanghai, China*
- 711 A ROBUST METHOD OF MARK RECOGNITION FOR ROBOT AUTONOMOUS NAVIGATION**  
Yi Liu<sup>1,2</sup>, Xiang Liu<sup>1</sup>, Yunyu Shi<sup>1</sup>, Fei Wu<sup>1,2</sup>, Juan Zhang<sup>1,2</sup>  
*1. School of Electronic and Electrical Engineering, Shanghai University of Engineering Science, Shanghai 201620, China*  
*2. Shanghai Key Laboratory of Computer Software Evaluating & Testing, Shanghai 200235, China*
- 716 DETECTION AND PRE-WARNING OF VEHICLE LANE CHANGE BASED ON STATE MACHINE**  
Xinnan Hu<sup>1,2</sup>, Xing Zhang<sup>1</sup>, Yougang Min<sup>3</sup>, Xinghua Yao<sup>1</sup>, Fei Wu<sup>1,2</sup>, Juan Zhang<sup>1,2</sup>  
*1. Shanghai University of Engineering Science, Shanghai 201620, China*  
*2. Shanghai Key Laboratory of Computer Software Evaluating & Testing, Shanghai 200235, China*  
*3. Shanghai Media Group*
- 721 HYPERSPECTRAL UNMIXING BASED ON WEIGHTED ABUNDANCE VECTOR REGULARIZATION**  
Chengzhi Deng<sup>1</sup>, Yan Li<sup>1</sup>, Gang Ding<sup>2</sup>, Jun Wang<sup>1</sup>, Zhaoming Wu<sup>1</sup>, Shengqian Wang<sup>1</sup>  
*1. Jiangxi Province Key Laboratory of Water Information Cooperative Sensing and Intelligent Processing, Nanchang, 330099*  
*2. School of Automation, Southeast University, Nanjing, 210096*
- 727 RESEARCH ON VELOCITY ESTIMATION IN HIGH DYNAMIC FLIGHT SIMULATION WITH A STAND-ALONE SINGLE-FREQUENCY GPS RECEIVER**  
Li Feng, LI Qiang, LIU Xudong  
*Beijing Institute of Tracking and Telecommunications Technology, Beijing 100094, China*
- 733 ONLINE SURVEILLANCE OBJECT CLASSIFICATION WITH TRAINING DATA UPDATING**  
Chunni Dai  
*Department of Information Technology, Shanghai Jianqiao College, Shanghai 201315, China*
- 738 AN RFID INDOOR POSITIONING SYSTEM BY USING PARTICLE SWARM OPTIMIZATION BASED ARTIFICIAL NEURAL NETWORK**  
Changzhi Wang<sup>1,2</sup>, Zhicai Shi<sup>1</sup>, Fei Wu<sup>1,2</sup>, Juan Zhang<sup>1,2</sup>  
*1. School of Electronic and Electrical Engineering, Shanghai University of Engineering Science, Shanghai 201620, China*  
*2. Shanghai Key Laboratory of Computer Software Evaluating & Testing, Shanghai 200235, China*
- 743 AN ADAPTIVE ANCHOR FRAME DETECTION ALGORITHM BASED ON BACKGROUND DETECTION FOR NEWS VIDEO ANALYSIS**  
Ruilin Xu, Chun-Yu Tsai, John R. Kender  
*Dept. of Computer Science, Columbia University, USA*

---

**Oral Session XII**  
**Remote Sensing and GIS, Image and Video Processing, Social Network and Data Mining, Machine Learning and Smart Information Processing**

---

**749 SHORT TEXT CLASSIFICATION  
BASED ON LDA TOPIC MODEL**  
Qiuxing Chen, Lixiu Yao, Jie Yang  
*Institution of Image Processing and  
Pattern Recognition, Shanghai Jiao Tong  
University, 200240, China*

**754 PARTICLE FILTER BASED ON  
REAL-TIME COMPRESSIVE  
TRACKING**  
Tianrun Zhou<sup>1</sup>, Yini Ouyang<sup>1,2</sup>, Rui Wang<sup>1</sup>,  
Yan Li<sup>2</sup>  
*1.School of Communication & Information  
Engineering, Shanghai University,  
Shanghai, China  
2.Shanghai Astronomical Observatory,  
Chinese Academy of Sciences, Shanghai  
200030*

**760 THEMATIC INFORMATION  
EXTRACTION IN HIGH-RESOLU-  
TION REMOTE SENSING IMAGE**

**BASED ON WEIGHTED PCA AND  
VBICA**  
Lan Liu, Chengfan Li, Yongmei Lei,  
Junjuan Zhao, Xiankun Sun  
*1.School of Computer Engineering and  
Science, Shanghai University, Shanghai,  
China  
2.Earthquake Administration of Shanghai  
Municipality, Shanghai, China*

**766 VIDEO PROCESSING USING  
GPU-ACCELERATOR UNDER  
DESKTOP VIRTUALIZATION  
ENVIRONMENT**  
Dan Liu<sup>1</sup>, Huiran Zhang<sup>1,2</sup>, Jichao Zhou<sup>1,2</sup>,  
Wenfeng Shen<sup>1</sup>, Min Cao<sup>1</sup>, Shengbo Chen<sup>1</sup>,  
Quan Qian<sup>2</sup>, Dongbo Dai<sup>1</sup>  
*1.School of Computer Engineering and  
Science, Shanghai University  
2.Materials Genome Institute, Shanghai  
University, NO.99, Shangda Road,  
Shanghai, 200444, P.R.China*