

2011 4th International Conference on Intelligent Networks and Intelligent Systems

(ICINIS 2011)

**Kuming, China
1 – 3 November 2011**



**IEEE Catalog Number: CFP1105F-PRT
ISBN: 978-1-4577-1626-3**

2011 Fourth International Conference on Intelligent Networks and Intelligent Systems

ICINIS 2011

Table of Contents

| | |
|--------------------------------------|------|
| Message from General Chair | x |
| Organizing Committee..... | xi |
| International Program Committee..... | xii |
| Sponsors..... | xiii |

Image Processing and Analyzing

| | |
|--|----|
| A Survey on Query Expansion Based on Local Analysis | 1 |
| <i>Jiayin Lei, Weijiang Li, Feng Wang, and Hui Deng</i> | |
| The Empirical Study of Input Modalities Sensed from Flipping a Cube | 5 |
| <i>Jibin Yin and Hua Liu</i> | |
| Research on Formal Semantics with Networks | 9 |
| <i>Chen Xing, Wang Haitao, and Hong Kun</i> | |
| A Clustering Algorithm Based on Square Inaccuracy Density | 13 |
| <i>Jianxiao Chen, Renbiao Wang, Le Huang, Han Yin, Mao Rui, and Liyan Dong</i> | |
| A New Classification Algorithm Based on Certainty Architecture | 17 |
| <i>Liyan Dong, Mo Shi, Renbiao Wang, Han Yin, Mao Rui, and Le Huang</i> | |
| Trusted Fault Tolerant Model of MANET with Data Recovery | 21 |
| <i>Chandrasekaran S., Shanmugam Udhayakumar, Mohan Bharathy U., and Jitendra Kumar Jain D.</i> | |
| Comparative Analysis of Ontology Construction Approaches from Relational Databases | 25 |
| <i>Maruf Pasha and Abdul Sattar</i> | |
| A Control Proposal for Circle Contour Manufacturing in Rotary Coordinate System | 29 |
| <i>Kousuke Okabe, Ryuichi Oguro, and Linfeng Lan</i> | |
| Secret Restoration Algorithms for the Image Data | 33 |
| <i>Noriaki Minami and Masao Kasahara</i> | |

| | |
|--|----|
| License Plate Location by Level Set Transform and Voronoi Diagram | 37 |
| <i>Yuqing Song and Lianshuan Shi</i> | |
| An Analysis System About the Distribution of Vocational Schools to Supply the Regional Economic Development | 41 |
| <i>Hang Hu</i> | |
| Blind Source Separation for Non-stationary Signal Based on Time-Frequency Analysis | 45 |
| <i>Shi He-Ping, Cao Ji-Hua, and Liu Xiao</i> | |

Intelligence and Application

| | |
|---|----|
| An Improved Real Time AR Method for the Surface Vessel Motion Prediction | 49 |
| <i>Zhuang Lin, Qiang Yang, Zhiqun Guo, and Xiaowen Li</i> | |
| The Research of Execute Unit's State Mechanism in Scientific Workflow System | 53 |
| <i>Yanbo Geng, Hui Deng, Feng Wang, Kaifan Ji, Bo Liang, and Yingbo Liu</i> | |
| Study on the Application of MRF and Fuzzy Clustering as Well as the D-S Theory to Image Fusion Segmentation of the Human Brain | 57 |
| <i>Yi-Hong Guan, Yatao Luo, Tao Yang, Lei Qiu, and Junchang Li</i> | |
| Minimum-Energy Trajectory Planning for an LCD Glass-Handling Robot | 61 |
| <i>Rong-Fong Fung and Yi-Hsin Cheng</i> | |
| Intelligent Optimization of the Replication of Injection Molding Light Guide Plates Using Rapid Mold Surface Inducting Heating | 65 |
| <i>Jyh-Cheng Yu, Ming-Shyan Huang, Zhi-Fu Liang, and Hong-Hwa Gu</i> | |
| Research on Development of Android Applications | 69 |
| <i>Jianye Liu and Jiankun Yu</i> | |
| Estimation of Image Focus Measure and Restoration by Wavelet | 73 |
| <i>Atika Jain, P.M. Kanjalkar, and J.V. Kulkarni</i> | |
| Robust Method of Age Dependent Face Recognition | 77 |
| <i>Hlaing Htake Khaung Tin and Myint Myint Sein</i> | |
| Modification Relations Based Emotional Keywords Annotation Using Conditional Random Fields | 81 |
| <i>Yunong Wu, Kenji Kita, Fuji Ren, Kazuyuki Matsumoto, and Xin Kang</i> | |
| The Non-dominated Sorting Genetic Algorithm Based on Layered Target | 85 |
| <i>Lianshuan Shi and Yinmei Chen</i> | |
| Paralleling Genetic Annealing Algorithm on Grid | 89 |
| <i>Hongbing Zhu, Chunli Li, Jianguo Wu, Jinguang Gu, and Kei Eguchi</i> | |
| Paralleling Euclidean Particle Swarm Optimization in CUDA | 93 |
| <i>Hongbing Zhu, Yongmei Guo, Jianguo Wu, Jinguang Gu, and Kei Eguchi</i> | |
| Implementation of 3D SRAD Algorithm on CUDA | 97 |
| <i>Hongbing Zhu, Ying Chen, Jinguang Gu, Jianguo Wu, and Kei Eguchi</i> | |

Network and Communication

| | |
|--|-----|
| Study on a Component Library Model Based on the Four-Layer Architecture | 101 |
| <i>Wang Haitao and Chen Xing</i> | |
| Application of Wireless Sensor Networks in Post-Disaster Road Monitoring System | 105 |
| <i>Xu-Guang Sun, Xiao-Ling Sun, Qiu-Ge Yang, and Shu-Nan Ma</i> | |
| Node Localization in WSN Based on Weighted Vectors Centroid Algorithm | 109 |
| <i>Xiaoqin Su and Zhaoming Lei</i> | |
| Optimal Buffering Resources Allocation of On-Chip Networks with Finite Buffers | 113 |
| <i>Li-Wei Wang</i> | |
| The Design and Implementation of Embedded Network Protocol Stack in MicroC/OS-II Operating System | 117 |
| <i>Xibo Wang and Zhen Zhang</i> | |
| Detection of Kaminsky DNS Cache Poisoning Attack | 121 |
| <i>Yasuo Musashi, Masaya Kumagai, Shinichiro Kubota, and Kenichi Sugitani</i> | |
| Network Bridge System for Interoperation of ZigBee-UPnP Network | 125 |
| <i>Seong-Joong Kim, Hae-Moon Seo, Woo-Chool Park, and Seong-Dong Kim</i> | |
| Research and Implementation of SNMP-Based Network Management System | 129 |
| <i>Jianqing Liu and Guangyong Liu</i> | |
| Optimal Finite Element Mesh Refinement Based on A-posteriori Error Estimator and the Quality of Mesh | 133 |
| <i>Xuan Zc</i> | |

Circuits Design and Computer Application

| | |
|---|-----|
| Design of a Hybrid Input Charge-Pump Utilizing Waste Heat and Its Thermal Analysis Method | 137 |
| <i>Kei Eguchi</i> | |
| Design of a Capacitor-Based MIMO DC-DC Converter and Its Optimal Control Method | 141 |
| <i>Kei Eguchi</i> | |
| Fast Catamaran Seakeeping Amelioration Using T-foils and Interceptors | 145 |
| <i>Zhiqun Guo, Zhuang Lin, Qiang Yang, and Xiaowen Li</i> | |
| Rule Extraction from Incomplete Decision System Based on Novel Dominance Relation | 149 |
| <i>Zhengcai Lu and Zheng Qin</i> | |
| The Construction and Application of Multitouch Interactive Platform Based on Touchlib | 153 |
| <i>Xibo Wang, Qiao Zhou, and Yizhong Xin</i> | |

| | |
|---|-----|
| Research on Structure Analysis for Java Program | 157 |
| <i>Qin Li-Yong, Jiang Ying, and Li Ying-Na</i> | |
| Method on Change Impact Analysis for Object-Oriented Program | 161 |
| <i>Zhou Xiao-Bo, Jiang Ying, and Wang Hai-Tao</i> | |
| Application Research of Railway Integrated Information Platform Based on EAI | 165 |
| <i>Chun Liu, Jinhui Lei, and Lei Hu</i> | |
| Understanding the Factors Affecting Computer Use Among Elderly Adults: A Survey | 169 |
| <i>Xiaolei Zhou</i> | |
| A Procedure of Generating an ISO-Compliant e-Catalog on the Basis of Existing Paper Catalogs | 173 |
| <i>Saburo Tanatsugu, Hiroshi Ninomiya, Isao Shirakawa, and Mamoru Kawanobe</i> | |
| Partial Instance Technology Based on Level of Detail | 177 |
| <i>Yun Liu, Lian-Suan Shi, Yun-Jia Wang, Li-Zong Li, and Chun-Yan Qi</i> | |
| The Dynamic Approval Based on ECA Rules and Email Transfer Mode | 181 |
| <i>Xu Man, Chen He-Ping, Li Xiao-Hui, and Zhou Chang</i> | |
| FEA-Based Comparison of Two Kinds of Steel Wire Reinforced Composite Pipes | 184 |
| <i>Xu Anping, Shang Peng, Zhao Jingjing, and Qu Yunxia</i> | |

Natural Language Processing

| | |
|--|-----|
| Research on Some Key Technologies of Tibetan Automatic Word Segmentation | 188 |
| <i>Yuan Sun, Xiaodong Yan, Xiaobing Zhao, and Guosheng Yang</i> | |
| Horizontal and Vertical Text Showing in Mongolian Chinese Digital Dictionary | 192 |
| <i>Huqitu and Baishuangcheng</i> | |
| The Automatic Construction Method of Mongolian WordNet Noun Sets of Synonyms | 195 |
| <i>Hasi and Nasun Urt</i> | |
| The Study of Comparison and Conversion about Traditional Mongolian and Cyrillic Mongolian | 199 |
| <i>Hao Li and Bao Sarina</i> | |
| Updating of the "Contemporary Chinese Language Word Segmentation Specification for Information Processing" | 203 |
| <i>Tong Laga and Xiaobing Zhao</i> | |
| The Criterion of Korean Written language, Policy Regulations of Korean Language and the 21st Century Information Technology Standards | 207 |
| <i>Xuan Long-Yun, Cui Rong-Yi, and Lu Shi-Dan</i> | |

| | |
|---|------------|
| Research on Question Classification Method of Tibetan Online Automatic Question-Answering System | 211 |
| <i>Rou Te</i> | |
| Statistical Analysis for Frequency of the Corpus-Based Modern Tibetan Basic Components | 214 |
| <i>Zhijie Cai and Rangzhuoma Cai</i> | |
| A Template-Based Tibetan Web Text Information Extraction Method | 218 |
| <i>Xiang Chuncheng and Weng Yu</i> | |
| A Method for Collecting Tibetan-Websites | 222 |
| <i>Wang Zhi-Juan, Zhao Xiao-Bin, and Yang Rui</i> | |
| TECS: A Web Text Extraction Tool Based on Semantic Similarity Calculation | 225 |
| <i>Weng Yu and Lirong Qiu</i> | |
| Study on the Text Analysis and Processing for Tibetan TTS | 229 |
| <i>Rangzhuoma Cai and Zhijie Cai</i> | |
| Structure Framework of the Traditional Knowledge Database in China | 232 |
| <i>Du Yuhuan, Guo Luo, Xue Dayuan, and Sun Faming</i> | |
| Chinese Minority Languages Processing: State of the Art and Prospects | 236 |
| <i>Lu Qian, Zhao Xiaobing, and Thongbay Sivilay</i> | |
| Author Index | 240 |