

Cross-Strait Conference on Information Science and Technology and iCube 2011

**Taipei, Taiwan
8 – 15 December 2011**

ISBN: 978-1-62993-384-9

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2011) by the Scientific Research Publishing Inc.
All rights reserved.

Printed by Curran Associates, Inc. (2014)

For permission requests, please contact the Scientific Research Publishing Inc.
at the address below.

Scientific Research Publishing Inc.
P.O. Box 54821
Irvine, CA 92619-4821

Phone: (408) 329-4591

bookorder@scirp.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

Contents

Part 1 Networking and Communications

Implementing an Novel Label Swithing on the NetFPGA Platform <i>Shuai ZHANG, Miangui LIANG</i>	(1)
Rayleigh Channel Analysis and Simulation for High-Speed Railway Environment <i>Ruisi HE, Zhangdui ZHONG, Bo AI, Haoxiang ZHANG</i>	(6)
Wireless Multi-Way Relaying System: Noncoherent Multiuser Detector Design <i>Jianfei CAO, Zhangdui ZHONG</i>	(12)
Factory Intelligent Monitoring System Based on the Internet of Things <i>Xianwu GAO, Yun LIU, Yu YAO</i>	(17)
An Energy-Efficient Coverage Strategy for Green Wireless Sensor Networks <i>Teng MA, Yun LIU, Zhenjiang ZHANG, Chenxu LIU</i>	(21)
The Analysis of Sina Micro-Blog Users <i>Hai Feng ZHANG, Yun LIU, Wei CHEN</i>	(25)
A Method of Automatic Text Summarization for Chinese Microblog <i>Ya SHI, Genying WANG, Yun LIU, Xinxiang XING</i>	(29)
A Novel Handoff Management Scheme for Wireless Mesh Networks <i>Jiaying SONG, Zhangdui ZHONG, Xu LI</i>	(33)
Evaluation of MATLAB Parallel and Distributed Computing on Large-Scale Simulation Platform <i>Zhiyong QIN, Zhangdui ZHONG, Ge BAI, Rongtao XU</i>	(38)
A New Technology of Hot Topics Detection Based on Clustering from Internet <i>Yuan WEN, Yun LIU, Shixian LI</i>	(44)
Implementation an Intelligent Travelling System in Tamsui Mackay Field <i>Li-Ling HUNG, Tsung-Cheng HOU</i>	(49)
Doppler Effect in High-Speed Railway Mobile Communications <i>Wei WANG, Rongtao XU, Xia CHEN</i>	(55)
Stable Clustering and Routing in Cognitive Radio Mobile Ad Hoc Networks <i>Haina YE, Zhenhui TAN, Shaoyi XU</i>	(60)
Capacity of MIMO System on Wideband Wireless Channel of High-Speed Railway <i>Lei XIONG, Zhangdui ZHONG, Jinlong QIAN, Cheng LI</i>	(65)
Smart Grid Trunking Communications Based on Distributed Network <i>Yong KONG, Zhenhui TAN, Xiangrong WANG</i>	(70)
Comparative Analysis of Dynamic Spectrum Sharing Algorithms Based on Game Theory <i>Li SU, Yan YANG</i>	(75)
Feasibility Analysis of Soft Frequency Reuse in Future Railway Communications <i>Ye HAN, Zhangdui ZHONG, Xia CHEN, Rongtao XU</i>	(79)
Interference Analysis of Soft Frequency Reuse for Future Railway Mobile Communication Systems <i>Jing ZHAO, Zhangdui ZHONG, Xia CHEN, Rongtao XU</i>	(83)
A Novel Fuzzy Handover Mechanism for LTE-Advanced Network <i>Gwo-Jong YU, Jer-Hsian LEE</i>	(88)
Performance Evaluation Technique Based on HIL Simulation Platform for Wireless Communication Network <i>Lei XIONG, Zhangdui ZHONG, Minwei ZHU</i>	(94)
A Simulation Model of Jointless Track Circuits Based on Boundary Conditions Analysis Method	

<i>Guo ZHOU, Huibing ZHAO, Shangpeng SUN</i>	(98)
Evaluation of Balise Performance Using Analytic Hierarchy Process	
<i>Shangpeng SUN, Huibing ZHAO, Limin GAO</i>	(104)
A New Calculation Method of Rail Head Surface Defect Area under the High Speed Condition	
<i>Guohao LV, Yaping HUANG, Xinlan JIANG</i>	(110)
Design and Implementation of a Cyber Physical System for Building Smart Living Spaces	
<i>Zhiyong BAI, Xinyuan HUANG</i>	(115)
Anomaly VOIP Call Detection	
<i>Ming-Yang SU, Chung-Chun CHEN</i>	(122)
Research on the Wireless Network Experiment Using MATLAB and OPNET Co-Simulation Strategy	
<i>Lingyun LU, Yizhi WANG, Yigang CEN, Haifeng DU</i>	(127)
A Comparative Study of Constraint-Based FPGA Detailed Routing Using SAT, SMT and CSP Engines	
<i>Bingli ZOU, Weimin WU</i>	(131)
A Distributed Service Test Bed with Live Mesh	
<i>Hongyun ZHENG, Yunfei ZHANG, Yishuai CHEN, Yi ZHENG, Dan HUANG, Changjia CHEN, Liufei WEN, Guangyu SHI</i>	(136)
Performance of Typical Routing Protocols in Linear Mobile Ad Hoc Networks	
<i>Ruifeng CHEN, Zhangdui ZHONG, Zhiyong QIN, Minming NI</i>	(141)
A Node Importance Evaluation Algorithm Based on Improved Topological Potential	
<i>Shaohai HU, Ningning WANG</i>	(146)
On the Upper Bound of Capacity for Composite MIMO Ricean and Gamma Fading Channels	
<i>Jiayi ZHANG, Zhenhui TAN, Haibo WANG</i>	(150)
Design and Implementation of a Data Mining System for Modeling and Analyzing Mobile Reading Behaviors	
<i>Wei-Je CHEN, Chiao-Chun YANG, Cheng-Chi WANG, Tzung-Shi CHEN</i>	(155)

Part 2 Information Education and Digital Learning

A Novel Visualization Model for Social Networking Service	
<i>Xinxiang XING, Yun LIU, Shixian LI, Yanchao ZHANG, Junjun CHENG</i>	(161)
SINA Weibo Features Analysis and Network Evolvment Research	
<i>Jie LIAN, Yun LIU, Shixian LI, Yanchao ZHANG, Junjun CHENG</i>	(165)
Research on Group Modeling and Opinion Evolution in Internet Community	
<i>Lei DENG, Yun LIU, Juan LI</i>	(171)
Research on the New Method of Course Design: Based on the Cognitive Load Theory	
<i>Yi JIN, Yizhi WANG</i>	(175)
Opinion Formation with the Evolution of Network	
<i>Fei XIONG, Yun LIU, Jiang ZHU, Ying ZHANG</i>	(180)
Thinking of Philosophy Socialscience Interdisciplinary Research in University	
<i>Jing WU, Wu'er YAN</i>	(185)
Design and Implementation of College Student Services and Guidance System	
<i>Shanna LI</i>	(188)
The Construction and Practice of Virtual Learning Community——Integrate Blog and Wiki with SY Learning System	
<i>Xinli LI</i>	(192)
Bringing Computational Thinking to a Computer Fundamental Course: A Constraint Satisfaction Approach	
<i>Weimin WU, Lan DONG</i>	(196)
A Sentence Similarity Computation Based on Domain Ontology	
<i>Peixian WANG, Weidong ZHU, Qianqian WU</i>	(200)
The New Trend of Interesting Learning in Basic Computer Education	

<i>Yang CHENG</i>	(205)
Heuristic Lab Education in Undergraduate Computer Architecture Teaching	
<i>Lan DONG</i>	(210)
Analysis on the Significance of General Science and Technology Terms Cross-Strait Adopted Digital Publication	
<i>Cong YAN, Fengxiang WANG</i>	(214)
The Practice and Research Report: Training Model and Course System Reform for Minority High Normal College Mathematical Students in New Situation	
<i>Yanbin CEN, Yu WEI, Jueqin WANG, Yigang CEN</i>	(218)

Part 3 Information and Communication Security

Passenger Real-Name Train Ticket Check-In System and Its Realization Based on Biometrics of Palm Vein	
<i>Bingbing CHENG, Shenghui WANG, Xiaoming DING, Chenchen BING</i>	(223)
Secure Hierarchical Encrypted-Data Aggregation for Wireless Sensor Networks	
<i>Chenxu LIU, Yun LIU, Zhenjiang ZHANG, Teng MA</i>	(228)
Identifying Computer Graphics Using Descriptive Statistics of Fractional B-Spline Wavelet Coefficients	
<i>Yanfei LU, Lian LIU</i>	(233)
Trust Verification of Booting File in Real Mode Using Portable TPM	
<i>Shuanghe PENG, Jiqiang LIU</i>	(239)
A Private Information Retrieval Scheme Based on Pairing	
<i>Wen-Chung KUO, Jiin-Chiou CHENG, Chien-Wen HUANG</i>	(243)
A QoE Monitoring System Based on Participation of Customer	
<i>Bo QU, Jiaying SONG</i>	(248)
Integrated Framework in Cloud Computing Services in Case of Enforcement Information Systems	
<i>Chi-Yao WENG, Yu-Hung CHANG, Shiug-Jeng WANG</i>	(251)

Part 4 Knowledge Engineering, Artificial Intelligence and Soft Computing

An Improved Growth Trends Prediction Model of Online Forum Topics	
<i>Junjun CHENG, Yun LIU, Wei CHEN, Yanchao ZHANG, Hui CHENG, Jie LIAN</i>	(257)
Position-Dependent Ranking SVM for Information Retrieval	
<i>Qiongqiong ZHANG, Weimin WU</i>	(261)
Chaos Ant Colony Algorithm in the Application of Traffic Jam Prediction	
<i>Chi ZHOU, Fazhen YI, Zhongli WANG</i>	(266)
Behavior Characteristics and Stubbornness Analysis of Microblog Users	
<i>Yanchao ZHANG, Yun LIU, Juan LI, Junjun CHENG, Xinxiang XING</i>	(271)
The Emotional Analysis Based on Chinese Text	
<i>Weidong ZHU, Qian LI, Xiumei WU</i>	(275)
Research on Algorithm of Group Structure Detection in Micro-Blogging	
<i>Wenna LV, Genying WANG, Wei CAO</i>	(280)
Data Prediction of the High-Speed Train Running Safety Based on Improved BP Neural Network	
<i>Dongyao JIA, Zuo CHEN, Ke HUANG</i>	(284)
An Online-Learning Algorithm for Train Stopping Control at Station Using Balises' Information	
<i>Rong CHEN, Dewang CHEN, Runmei LI</i>	(289)
The Safety Analysis of Train Drivers' Driving Behavior	
<i>Jing WANG, Hairong DONG</i>	(294)
Neuron Classification and Identification Based on the Fisher Discriminant Analysis	

Zhipeng ZHAO, Yi HUANG, Yigang CEN, Xiaoli HAO.....(299)

Part 5 Multimedia

Segmentation of Salivary Gland Ultrasound Image Based on Multiple Normalized Cut <i>Xiangrong WANG, Houjin CHEN, Jupeng LI, Yong KONG</i>	(305)
A New Construction Method for Generalized Hadamard Matrix in Compressive Sensing <i>Ruizhen ZHAO, Hao LI, Zhou QIN, Shaohai HU</i>	(309)
An Improved Network-Flow Phase Unwrapping Method for SAR Interferometry <i>Yan SHEN, Houjin CHEN, Xiaoli HAO</i>	(314)
Non-Rigid 3D Model Retrieval Based on Adaptive Selection of Geometric Words <i>Yajie LI, Lili WAN, Zhenjiang MIAO, Xiaohui YANG</i>	(319)
A Multi-Instances Generation Algorithm for 3D Models Using Hierarchical Clustering and Retrieval Application <i>Lili WAN, Binghua LI, Zhenjiang MIAO</i>	(324)
Video Colorization <i>Chiang-Ming CHIANG, Jou-An CHEN, Chen-Yu KAO, Jih-Pin YEH, Hwei Jen LIN</i>	(330)