2012 International Conference on Information Security and Intelligent Control

(ISIC 2012)

Yunlin, Taiwan
14 – 16 August 2012
Preface
Committees

Innovative Information Technology (1)

Machine Learning Algorithms for Data Categorization and Analysis in Communication
Tan Xian

A Proposal of Sensor Data Collection System Using Mobile Relay Nodes
Hu Yin and Yunfei Lv

Multimedia Support Framework for Distributed Web-based Collaborative Editing
Yung-Feng Lu, Po-Hung Lin, Shih-Chun Chou and Rong-Sheng Wang

A Greedy Approach for Floorpanning Mass Modules
Jyh Perng Fang, Yang Lang Chang, Jong Yu Jen and Tai-Long Wang

A Matrix Algebra for the Linear Complexity of Periodic Sequences
Chin-Gwo Ma

A Simple two steps algorithm for face recognition
Ming Zhao and Hu Jie

Reliable and Reconfigurable Computing Technology

A Simple Testing Structure for Analog Circuits
Hsin-Wen Ting

An Overkill Detection System for Improving the Testing Quality of Semiconductor
Hsin-Wen Ting and Chi-Ming Hsu
The DDRx Memory Controller Extended for Reconfigurable Computing

Jih-Ching Chiu and Kai-Ming Yang

Power Optimal Partitioning for Dynamically Reconfigurable FPGA

Tzu-Chiang Tai

Design of Embedded Remote Control System

Wei-Lun Wang

A Modified Energy Efficient Backup Hierarchical Clustering Algorithm for WSN

Tan Xian

Innovative Information Technology (2)

A Novel Statistical Automaton for Network Cloud Traffic Classification

Hai-Qiang Wang, Kuo-Kun Tseng and Jeng-Shyang Pan

Efficient Identity Based Threshold Proxy Signature Scheme in Cloud Environment

Ying-Ying Qiao, Xiaonan Jiang, Hao Wen Lin and Jeng-Shyang Pan

A Hybrid Intelligent Protocol In Sink-oriented Wireless Sensor networks

Hsung-Pin Chang and Shun-Chih Hsu

A Multi-Dimension Hash Index Design for Main-Memory RFID Database Applications

Yung-Feng Lu and Sheng-Shang Ye

An Efficient Fine-Grained Access Control Mechanism for Database Outsourcing Service

Hue T. B. P., Luyen G. N., Kha N. D., S. Wohlgemuth, I. Echizen, Thuc D. N. and Thuy T. B. D

Research on Address Shortage In A Tree Based ZigBee Network

Yunfei Lv

A Congestion-Relief Method for Wormhole-Routed 2D Mesh Networks

Wen-Fong Wang and Yi-Jhou Shen

Innovative Control Technology

Jacobian-Based Motion Planning for Climbing Robots

Chien-Chou Lin and Shih-Syong Dai

Design of a Context Aware Exercise System Paper

Wen-Fong Wang and Wei-Jing Liou

A New Hybrid Tolerant Controller design and it application to the flight control

Jie Chen, Cunbao Ma and Dong Song
A Graph Split on Greedy-algorithm-based Self Organization Protocols

Hu Yin and Yunfei Lv

PI Control Design Based on Sensitivity Analysis and Genetic Algorithms

Shan-Chang Hsieh, Jau-Woei Perng and Li-Shan Ma

An Intelligent Fuzzy-PID Controller for a Reconfigurable Machine Tool

Sibusiso M. Ndabukelwayo, Khumbulani Mpofu and Nkgatho Tlale

**Intelligent Data Analysis**

Enhancing Image Quality in Visual Cryptography with Colors

Chun-Yuan Hsiao and Hao-Ji Wang

A Statistic Approach for Photo Quality Assessment

Li-Yun Lo and Ju-Chin Chen

A High Coherent Utility Fuzzy Itemsets Mining Algorithm

Chun-Hao Chen, Ai-Fang Li and Yeong-Chyi Lee

Simulation Framework for Travel Trajectory Generation and Mobile Transaction Modeling

Eric Hsueh-Chan Lu, Josh Jia-Ching Ying, Huan-Sheng Chen, Kawuu W. Lin and Vincent S. Tseng, Huan-Wen Tsai, Kuang Hung Cheng and Shun-Chieh Lin

A Health Management Application with QR-Code Input and Rule Inference

Hui-Huang Hsu, Min-Ho Chang and Neil Y. Yen

Efficient Public key Homomorphic Encryption Over Integer Plaintexts

Y Govinda Ramaiah and G Vijaya Kumari

**Communication Networks**

Fuzzy-Based Target Tracking on Vehicular Grid Sensor Networks

Yih-Fuh Wang and Chang-Ting Wu

A Novel OVSF-based Multi-rate OCDMA-PON and Its Optimal Configuration

Yih-Fuh Wang

Improved “Bidirectional Quantum Secure Communication Protocol Based on A Shared Private Bell State”

Ching-Ying Lin and Tzonelih Hwang

On “Controlled Quantum Teleportation and Secure Direct Communication”

Shih-Hung Kao and Tzonelih Hwang

The Design of P2P-based VoD System with VCR Functionality

Ching-Lung Chang and Sih-Ping Huang
Simulation-Based Meta-heuristic Approach for Booking Limits Problem at a Hotel Baby

Shih-Cheng Horng and Feng-Yi Yang

Advances in Network Security and Applied Cryptography

A Commutative Encryption Scheme based on ElGamal Encryption.................156
Kaibin Huang and Raylin Tso

An Efficient Delegation Protocol in Mobile RFID Networks.........................160
Jia-Ning Luo and Ming-Hour Yang

Multi-level and Group-based Key Management for Mobile Ad Hoc Networks.....164
Hsiao-Ching Lin, Ming-Kung Sun, Hui-Tang Lin and Wen-Chung Kuo

The Design of ID-based Fair Proxy Blind Signature Scheme with Weak Linkability.................................................................168
Chih Hung Wang and Jia-Yu Fan

Hybrid Data Deduplication in Cloud Environment.......................................174
Chun-I Fan, Shi-Yuan Huang and Wen-Che Hsu

An Efficient Oil and Gas Pipeline Monitoring Systems based on Wireless Sensor Networks.................................................................178
Huaping Yu and Mei Guo

Innovative Image Processing

Efficient Reversible Steganographic Embedding by the Integration of Reduplicated EMD and Image Interpolation.........................................................182
Chin-Feng Lee and Kai-Chin Chen

The Human-Height Measurement Scheme by Using Image Processing Techniques.................................................................186
Chuin-Mu Wang and Wen-Yuan Chen

Degenerative Disc Segmentation and Diagnosis Technology Using Spine Important Features from MRI of Spine in Images........................................190
Ming-Chi Wu and Cheng-An Fang

Effective Multiple-features Extraction for Off-line SVM-Based Handwritten Numeral Recognition.................................................................194
Shen-Wei Lee and Hsien-Chu Wu

Practical Homography-Based Perspective Correction Method for License plate Recognition.................................................................198
Shih-Jui Yang, Chian C. Ho, Jian-Yuan Chen and Chuan-Yu Chang

Automated Assessment of Breast Cancer Lymphatic Infiltration by H&E Image.........................................................................................202
Intelligent Multimedia Processing and Analysis
Motion Estimation of Depth Map Based on Perceptual Attention Region.........206
Pei-Jun Lee and Chun-Yuan Cheng
A Face Tracking Method Using Feature Point Tracking.............................210
Guo-Shiang Lin and Tung-Sheng Tsai
Ghosting Elimination with A* Seam Optimization in Image Stitching.........214
Jyun-Hong Chen and Cheng-Ming Huang
Two Dimensional to Three Dimensional Image Conversion System Design of Digital Archives for Classical Antiques and Document.................................218
Bing-Lian Lin, Li-Cheng Chang, Sheng-Siang Huang, De-Wei Shen and Yu-Cheng Fan
Detecting Masses in Digital mammograms Based on Texture Analysis and Neural Classifier.................................................................222
Guo-Shiang Lin, Yu-Cheng Chang, Wei-Cheng Yeh, Kai-Che Liu, Chia-Hung Yeh
Restoration of Out of Focus Images Using Neural Network........................226
Hun-Chen Chen, Jui-Cheng Yen and Hung-Chun Chen

Multimedia Information Security and Signal Processing
Visual Saliency based Mobile Images Categorization Using Sparse Representation on Cloud Computing.................................................................230
Duan-Yu Chen, Meng-Kai Hsieh, Jung-Hsi Lee
Visual Attention Guided Images Abstraction Using Sparse Coding................234
Duan-Yu Chen, Thao-Ling Chang
Efficient Image/Video Dehazing Through Haze Density Analysis Based on Pixel-based Dark Channel prior.........................................................238
Chia-Hung Yeh, Li-Wei Kang, Cheng-Yang Lin and Chih-Yang Lin
Image Copy Detection via Dictionary Learning and Sparse Coding...............242
Chih-Yang Lin, Li-Wei Kang, Kahlil Muchtar, Jyh-Da Wei and Chia-Hung Yeh
Privacy-Preserving Multimedia Cloud Computing via Compressive Sensing and Sparse Representation.............................................................246
Li-Wei Kang, Kahlil Muchtar, Jyh-Da Wei, Chih-Yang Lin, Duan-Yu Chen and Chia-Hung Yeh
Diagnosing Prostate Diseases in Color Doppler Ultrasound Images..............250
Chuan-Yu Chang, Cheng-Min Fan and Yuh-Shyan Tsai

Computing on Pattern Recognition and Computer Vision
Face Recognition Based on Collaborative Image Similarity
Deng-Yuan Huang, Ta-Wei Lin, Wu-Chih Hu and Mu-Song Chen
Online Transductive Support Vector Machines for Classification
Mu-Song Chen, Tze-Yee Ho and Deng-Yuan Huang
An Enhanced Biometric Score Fusion Scheme Based on the AdaBoost Algorithm
Wei-Yang Lin and Chuan-Jheng Yang
Automatic Quality Assessment and Preprocessing for Three-Dimensional Face Recognition
Wei-Yang Lin and Ming-Yang Chen
Photo-Consistent 3D Model Deformation for Novel View Image Synthesis
Meng-Hsuan Chia, Chien-Hsing He and Huei-Yung Lin
Automatic Counting of Packaged Wafer Die Based on Machine Vision
Hsuan-Ting Chang and Ren-Jie Pan

Information System, Management and Security
Cryptanalysis on PHOTON Hash Function using Cube Attack
Chia-Yu Lu, You-Wei Lin, Shang-Ming Jen and Jar-Ferr Yang
Against the Breaches: Data Loss Prevention For Online Travelling Services
Ada Hui-Chuan Chen, Huei-Chung Chu and Sou-Chein Wu
The High Embedding Steganographic Method Based on General Multi-EMD
Wen-Chung Kuo, Lih-Chyau Wuu and Shao-Hung Kuo
An Overview on RFID Based Games and its Value Chain in the Games Industry
Yu-Chih Huang
A Low-Complexity Data-Fusion Algorithm Based on Adaptive Weighting for Location Estimation
Yih-Shyh Chiou, Fuan Tsai and Sheng-Cheng Yeh
Face Recognition by Principle Vectors Subspace
Ling-Ling Peng and Qiong Kang

Control Theory and Application
Two Liquid-Levels System Control Based on Using PI Controllers
Wei-Der Chang
Robust $H_\infty$ Switching Control for Uncertain Discrete Switched Time-delay Systems
Chang-Hua Lien, Ker-Wei Yu and Hao-Chin Chang
Genetic Algorithm using Discrete Cosine Transformation for Fractal Image Encode

Ming-Sheng Wu

Quadratic Permutation Polynomial Interleaver for LTE Turbo Coding

Ching-Lung Chi and Chih-Hsiao Kuo

A Modified Probability Neural Network Indoor Positioning Technique

Chih-Yung Chen, Yu-Ju Chen, Li-Peng Yin and Rey-Chue Hwang

An Improved Classifier based on Nearest Feature Line

Youfu Du, Ming Zhao and Qingxiang Feng

Innovative Computing Technology

Access-Controlled Video/Voice over IP in Hadoop System with BPNN Intelligent Adaptation

Bao Rong Chang, Hsiu Fen Tsai, Zih-Yao Lin and Chi-Ming Chen

An EPQ Model with Two Levels of Trade Credit Policy under Supplier Credits Linked to Ordering Quantity Based on the Triangular Fuzzy Numbers

Liang-Ho Chen, Tien-Tsai Huang, Chih-Te Yang and Shui-Ching Chang

Application of Active Appearance Model for Dual-Camera Face Recognition

Chuan-Yu Chang and Cyun-Siang Huang

Blood Vessel Segmentation in Retinal Images Based on the Nonsubsampled Contourlet Transform

Chien-Cheng Lee and Shih-Che Ku

A Method For Fetal Assessment Using Data Mining and Machine Learning

Wes Copeland and Chia-Chu Chiang

An Extended PCA and LDA for Color Face Recognition

Qiong Kang and Lingling Peng