2012 IEEE RIVF International Conference on Computing & Communication Technologies, Research, Innovation, and Vision for the Future

(RIVF 2012)

Ho Chi Minh City, Vietnam
27- February – 1 March 2012

IEEE Catalog Number: CFP1256A-PRT
ISBN: 978-1-4673-0307-1

Copyright © 2012 by the Institute of Electrical and Electronic 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: CFP1256A-PRT
ISBN 13: 978-1-4673-0307-1

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

Information Management

Vietnamese Diacritics Restoration as Sequential Tagging 001
Minh Trung Nguyen, Quoc Nhan Nguyen and Hong Phuong Nguyen

A Framework to Combine Multiple Matchers for Pair-Wise Schema Matching 007
Thanh Tam Nguyen, Quoc Viet Hung Nguyen and Thanh Tho Quan

Linguistically Motivated and Ontological Features for Vietnamese Named Entity Recognition 013
Truc-Vien T. Nguyen and Tru H. Cao

A Knowledge-Driven Educational Decision Support System 019
Thi Ngoc Chau Vo and Hua Phung Nguyen

E-Learning Adoption and Assimilation in SMEs: A Research Framework 025
Louis Raymond, Sylvestre Uwizeyemungu, François Bergeron and Stéphane Gauvin

An Enhanced Scheme for Privacy-Preserving Association Rules Mining on Horizontally Distributed Databases 029
Xuan Canh Nguyen, Hoai Bac Le and Tung Anh Cao

Computational Intelligence

Extraction of Discriminative Patterns from Skeleton Sequences for Human Action Recognition 033
Tran Thang Thanh, Fan Chen, Kazunori Kotani and Hoai-Bac Le

Dynamic Time-Linkage Problems - The Challenges 039
Trung Thanh Nguyen, Zaili Yang and Stephen Bonsall

Algorithms for Testing of Codes and Lozenge-Codes 045
Dinh Han Nguyen, Ngoc Vinh Ho, Quyet Thang Dang and Trung Huy Phan

Mining Association Rules Restricted on Constraint 051
Anh N. Tran, Tin C. Truong, Bac H. Le and Hai V. Duong

An Efficient Incremental Mining Approach Based on IT-Tree 057
Thien-Phuong Le, Tzung-Pei Hong, Bay Vo and Bac Le

Combining Statistical Machine Learning with Transformation Rule Learning for Vietnamese Word Sense Disambiguation 062
Phu-Hung Dinh, Ngoc-Khuong Nguyen and Anh-Cuong Le

Using Machine Translation for Recognizing Textual Entailment in Vietnamese Language 068
Minh Quang Nhat Pham, Minh Le Nguyen and Akira Shimazu

Mining Disjunctive Rules in Dynamic Graphs 074
Kim-Ngan T. Nguyen, Marc Plantevit and Jean-François Boulicaut

Rough Set Methods for Large and Spare Data in EAV Format 080
Wojciech Swieboda and Hung Son Nguyen

A Modified Regularized Non-Negative Matrix Factorization for MovieLens 086
Huy Nguyen and Tien Dinh

Vietnamese Parsing with an Automatically Extracted Tree-Adjoining Grammar 091
Phuong Le Hong, Thi Minh Huyen Nguyen and Azim Roussanaly

Exploiting Non-Parallel Corpora for Statistical Machine Translation 097
Cuong Hoang, Anh Cuong Le, Phuong Thai Nguyen and Tu Bao Ho

Multivariate Mutual Information Measures for Discovering Biological Networks 103
Tho Hoan Pham, Tu Bao Ho, Quynh Diep Nguyen, Dang Hung Tran and Van Hoang Nguyen

Time Series Clustering Based on I-k-Means and Multi-Resolution PLA Transform 109
Vuong Ba Thinh and Duong Tuan Anh

Efficient Query Answering for Fuzzy Linguistic Logic Programming 113
Van Hung Le

A Grammatically Structured Noun Phrase Extractor for Vietnamese 117
Hoai-Duc Tuan-Nguyen, Bao-Quoc Ho, Tuan-Dung Bui and Minh-Chau Hoang

Learning in Stages: A Layered Learning Approach for Genetic Programming 121
Thi Hien Nguyen and Xuan Hoai Nguyen

An Approach to Word Sense Disambiguation in English-Vietnamese-English Statistical Machine Translation 125
Quy Nguyen, An Nguyen and Dien Dinh

Parallel Generation of Permutations by Inversion Vectors 129
Hoang Chi Thanh

Improving English-Vietnamese Word Alignment Using Translation Model 133
Giang Thanh Nguyen and Dien Dinh

Communications and Networking

Topology Optimization for DHT-Based Application Layer Multicast 137
Hoai Son Nguyen, Huong Bui Thi Lan and Ngoc Anh Nguyen

Soft Input Trust Output 143
Natasa Zivic

On Relationship between Quality of Experience and Quality of Service Metrics for IMS-Based IPTV Networks 149
Thu-Huong Truong, Tai-Hung Nguyen and Huu-Thanh Nguyen

An Efficient FPGA Implementation of the Advanced Encryption Standard Algorithm 155
Trang Hoang and Van Loi Nguyen

Enhancement of TCP Fairness Performance by Rate Adaptation Based on Channel Access Control in Multi-Hop Ad Hoc Networks 159
Thanh Giang Pham and Kenji Nakagawa

Fall Detection Based on Movement and Smart Phone Technology 163
Quang Viet Vo, Gueesang Lee and Deokjai Choi

An Optimal Algorithm of Estimation Channel Combining Kalman Filter with Adaptive Guard Interval for Mobile WiMAX Standard 167
Nguyen-Duc Quang, Pham-Hong Lien, Nguyen-Manh Thang and Luu-Thanh Tra

Modeling and Computer Simulation

An Operational Meta-Model for Handling Multiple Scales in Agent-Based Simulations 171
Duc-An Vo, Alexis Drogoul and Jean-Daniel Zucker

Spatial Estimator of Brown Plant Hopper Density from Light Traps Data 177
Vinh Khai Huynh, Jean-Daniel Zucker, Hiep Xuan Huynh and Alexis Drogoul

Which Behavior Is Best in a Fire Evacuation: Simulation with the Metro Supermarket of Hanoi 183
Manh Hung Nguyen, Tuong Vinh Ho, Thi Ngoc Anh Nguyen and Jean-Daniel Zucker

A Polynomial-Time Algorithm for Reachability Problem of a Subclass of Petri Net and Chip Firing Games 189
Manh Ha Le, Van Trung Pham and Thi Ha Duong Phan

Simulation of Emergency Evacuation of Pedestrians along the Road Networks in Nhatrang City 195
Thi Ngoc Anh Nguyen, Jean Daniel Zucker, Manh Hung Nguyen, Alexis Drogoul and Hong Phuong Nguyen

Simulation of Salinity Intrusion in the Context of the Mekong Delta Region (Viet Nam) 201
Hien Ngoc Hoang, Hiep Xuan Huynh and Trung Hieu Nguyen

The Relationship of Contact Angle and Input Shaping Scheme in Automotive Wiper System 205
M. A. Salim, A. Noordin, F. A. Munir and N. R. M. Nuri

Applied Operational Research and Optimization

Heuristics to Solve a Real-World Asymmetric Vehicle Routing Problem with Side Constraints 209
San Pham, Viviane Gascon and Tien Dinh

A Heuristic Algorithm for Finding the Closest Trio of 3-Colored Points from a Given Set of 3-Colored Points on Plane 215
Trung N. Nguyen and Duc A. Duong

Heuristic Algorithms for Solving the Survivable Problem in the Design of Last Mile Communication Networks 219
Thi Minh Nguyen, Thi Thanh Binh Huynh and Khanh Trung Vo

Hybridization of Genetic Algorithm and Branch-and-Price Framework for Solving the One Dimensional Cutting Stock Problem with Multiple Stock Sizes 225
Phan Thi Hoai Phuong

An Experimental Study about Efficiency of the Approximation Algorithms for Minimum Latency Problem 230
Ha Bang Ban and Duc Nghia Nguyen

GA_SVM: A Genetic Algorithm for Improving Gene Regulatory Activity Prediction 234
Dong Do Duc, Tri-Thanh Le, Trung-Nghia Vu, Huy Q. Dinh and Hoang Xuan Huan

Software Engineering and Embedded Systems

An Improvement of Minimized Assumption Generation Method for Component-Based Software Verification 238
Ngoc Hung Pham, Viet-Ha Nguyen, Toshiaki Aoki and Takuya Katayama

An Intermediate Library for Multi-GPUs Computing Skeletons 244
Duc Tung Le, Huu Duc Nguyen, Tuan Anh Pham, Huy Hoang Ngo and Minh Thap Nguyen

An Approximation-Based Abstract Interpretation Framework for Formal Verification of Floating-Point Programs 250
Vinh D. Thai, Tho T. Quan, Tien V. Le and Binh T. Ngo

Human Machine Interface and Imaging Technologies

Gabor Wavelet-Based Appearance Models 254
Kha Gia Quach, Chi Nhan Duong, Khoa Luu and Hoai Bac Le

Advanced High-Adaptive Image Coding for Frame Memory Reduction in LCD Overdrive 260
Tai Huu Nguyen and Hoang-Lan Thi Nguyen

Virtual View Synthesis Using Temporal Hole Filling with Bilateral Coefficients 266
Jae-Il Jung and Yo-Sung Ho

An Effective 3D Geometric Relational Feature Descriptor for Human Action Recognition 270
Le Uyen Thuc Hoang, Van Tuan Pham and Jenq-Neng Hwang

Unsupervised and Semi-Supervised Clustering for Large Image Database Indexing and Retrieval 276
Hien Phuong Lai, Muriel Visani, Alain Boucher and Jean-Marc Ogier

Higher Order Conditional Random Field for Multi-Label Interactive Image Segmentation 282
Tien-Vu Nguyen, Nghia Pham, Trung Tran and Bac Le

Video Monitoring System: Counting People by Tracking 286
Dat Nguyen, Loc Huynh, Thang Ba Dinh and Tien Dinh

Checking and Correcting the Source Code of Web Pages for Accessibility 290
Thi-Huong-Giang Vu, Dat Trinh Tuan and Van-Hung Phan

A Novel Technological Imaging Process Using Ionizing Radiation Properties 294
M. K. Nguyen, C. Faye, G. Rigaud and T. T. Truong

Applying Virtual Reality for In-Door Jogging 298
Trung-Nghia Le, Quoc-Minh Bui, Vinh-Tiep Nguyen, Minh-Triet Tran and Anh-Duc Duong