

# **Advances in Intelligent Systems and Computing**

Volume 331

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Editors

# Computational Intelligence in Information Systems

Proceedings of the Fourth INNS Symposia  
Series on Computational Intelligence  
in Information Systems (INNS-CIIS 2014)

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# Preface

The International Neural Network Society Symposia Series (INNS Symposia Series) is a biennial event. The first country that hosted the INNS Symposia Series was New Zealand back in 2008; followed by Peru and Thailand for the second and third Series, respectively. The fourth INNS symposia series was held in Bandar Seri Begawan, Brunei from November 7 to November 9, 2014 at Institut Teknologi Brunei. The event provides a platform for researchers to exchange the latest ideas and to present new research advances in general areas related to computational intelligence and their applications in various domains. The theme for the fourth Symposia Series was “Computational Intelligence in Information Systems”.

This year, the international program committees were formed by 75 researchers from 15 different countries. A total of 72 submissions from 16 countries were submitted to the event for double-blind peer-review. Of those, 34 submissions (47.2%) were selected to be included in this book.

First and foremost, we would like to thank the keynote speakers, the invited speakers and all the authors who had spent time and effort to make important contributions to this event. We would also like to thank the symposium chairs and all their members who had provided expert evaluation of the submitted papers; members of the local organizing committee for their contribution, despite their busy schedule; Pg Hj Mohd. Esa Al-Islam Bin Pg HjMd. Yunus and all members of the steering committee for their useful advice; Irwin King, Jonathan H. Chan, and Hussein A. Abbass for their useful suggestions and discussions; Janusz Kacprzyk, the series editor of the “Advances in Intelligent Systems and Computing” book series; Hjh Zohrah binti Haji Sulaiman, our Acting Vice Chancellor; and last but not least, Hjh Noor Maya binti Haji Md Salleh, who was our immediate supervisor when we decided to host the INNS symposia series in Brunei.

We would also like to acknowledge the following organizations: Institut Teknologi Brunei for its institutional and financial support, and for providing premises and administrative assistance; Bank Islam Brunei Darussalam (BIBD) and DST for their generous financial support; International Neural Network Society (INNS); King Mongkut Institute of Technology, Ladkrabang; King Mongkut University of Technology, Thonburi; ICONIP 2014 organizing committee; and Springer for their technical support.

We thank all of you and we hope that you will consider contributing to the future INNS symposia series event.

September 2014

Somnuk Phon-Amnuaisuk  
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# Contents

## Invited Paper

<b>Advances in Workflow Systems</b> .....	1
<i>Paul Wai Hing Chung</i>	

## Applied Intelligent Computing

<b>A Novel Algorithm to Detect a QPSK Signal with the Minimum Number of Samples</b> .....	11
<i>Mohammed Saleh, Hilmi Sanusi, Adamu I. Abubakar, Haruna Chiroma, Edi Sutoyo, Mungad, Tutut Herawan</i>	

<b>An Ensemble CRT, RVFLN, SVM Method for Estimating Propane Spot Price</b> .....	21
<i>Haruna Chiroma, Sameem Abdul-kareem, Abdulsalam Ya'u Gital, Sanah Abdullahi Muaz, Adamu I. Abubakar, Mungad, Tutut Herawan</i>	

<b>Hybrid Artificial Neural Network with Artificial Bee Colony Algorithm for Crime Classification</b> .....	31
<i>Syahid Anuar, Ali Selamat, Roselina Sallehuddin</i>	

<b>PSO Based Throughput Optimization for Mobile Sensor Networks</b> .....	41
<i>Adnan Fida, Nor Jaidi Tuah, Trung Dung Ngo</i>	

<b>Clustering Natural Language Morphemes from EEG Signals Using the Artificial Bee Colony Algorithm</b> .....	51
<i>Suriani Sulaiman, Saba Ahmed Yahya, Nur Sakinah Mohd Shukor, Amelia Ritahani Ismail, Qazi Zaahirah, Hamwira Yaacob, Abdul Wahab Abdul Rahman, Mariam Adawiah Dzulkifli</i>	

<b>The Initial Investigation of the Design and Energy Sharing Algorithm Using Two-Ways Communication Mechanism for Swarm Robotic Systems</b> .....	61
<i>Amelia Ritahani Ismail, Recky Desia, Muhammad Fuad Riza Zuhri</i>	

<b>Second Order Back Propagation Neural Network (SOBPNN) Algorithm for Medical Data Classification</b> .....	73
<i>Nazri Mohd Nawi, Norhamreeza Abdul Hamid, Nursyafika Harsad, Azizul Azhar Ramli</i>	
<b>Weighted Linear Fractional Programming for Possibilistic Multi-objective Problem</b> .....	85
<i>Nureize Arbaiy</i>	
<b>Intelligent Double Treatment Iterative Algorithm for Attribute Reduction Problems</b> .....	95
<i>Saif Kifah, Salwani Abdullah, Yahya Z. Arajy</i>	
<b>Modeling Associative Memories Using Formal Concept Analysis</b> .....	109
<i>Cherukuri Aswani Kumar, M.S. Ishwarya, Chu Kiong Loo</i>	
<b>A New State Reduction Approach for Fuzzy Cognitive Map with Case Studies for Waste Management Systems</b> .....	119
<i>Miklós Ferenc Hatwágner, Adrienn Buruzs, Péter Földesi, László Tamás Kóczy</i>	
<b>Building Renovation Cost Optimization with the Support of Fuzzy Signature State Machines</b> .....	129
<i>Gergely I. Molnárka, László Tamás Kóczy</i>	
<b>Data Analytics</b>	
<b>Cross-Platform Pathway Activity Transformation and Classification of Microarray Data</b> .....	139
<i>Worrawat Engchuan, Asawin Meechai, Sissades Tongsimma, Jonathan H. Chan</i>	
<b>Text Censoring System for Filtering Malicious Content Using Approximate String Matching and Bayesian Filtering</b> .....	149
<i>Khairil Imran Ghauth, Muhammad Shurazi Sukhur</i>	
<b>Application of Optimum Binning Technique in Data Mining Approaches to Predict Students' Final Grade in a Course</b> .....	159
<i>Syed Tanveer Jishan, Raisul Islam Rashu, Ashfaq Mahmood, Fahad Billah, Rashedur Mohammad Rahman</i>	
<b>Beautiful Trochoids</b> .....	171
<i>Noor Deenina Hj Mohd Salleh, Somnuk Phon-Amnuaisuk</i>	
<b>The Impact of Knowledge, Skill, Attitude and Confidence in Information Communication and Technology in Teaching and Learning among Teachers in Technical School</b> .....	181
<i>Azizi Yahaya, Gooch Mo Lee, Halimah Ma'alip, Dayang Ku Zainab Pg Hj Tuah, Zeliha Mohammad Ali, Kamariah Hj Kasah, Zarifa Binti Mohd Sis</i>	

<b>The Impact of Social Networking on Behaviour Development among Secondary School Students</b> .....	191
<i>Azizi Yahaya, Gooch Mo Lee, Halimah Ma'alip, Dayang Ku Zainab Pg Hj Tuah, Zeliha Mohammad Ali, Kamariah Hj Kasah, Zarifa Binti Mohd Sis</i>	

## Emerging Digital Media

<b>KIHECT<sup>©</sup>: Reliability of Hand-Eye Coordination among Rugby Players Using Consumer Depth Camera</b> .....	201
<i>Mohd Razmi Rozan, Mohd Kufaisal Mohd Sidik, Mohd Shahrizal Sunar, Abdul Hafidz Omar</i>	

<b>3D Object Detection for Reconstructed Scene Using Multi-layer Growing Neural Gas</b> .....	211
<i>Parham Nooralishahi, Chu Kiong Loo</i>	

<b>Modified K-means Combined with Artificial Bee Colony Algorithm and Differential Evolution for Color Image Segmentation</b> .....	221
<i>Mohammad Babrdel Bonab, Siti Zaiton Mohd Hashim, Ahmed Khalaf Zager Alsaedi, Umami Raba'ah Hashim</i>	

<b>Computer-Aided Dental Caries Detection System from X-Ray Images</b> .....	233
<i>Abdolvahab Ehsani Rad, Ismail Bin Mat Amin, Mohd Shafry Mohd Rahim, Hoshang Kolivand</i>	

<b>Multimodal Fusion: Gesture and Speech Input in Augmented Reality Environment</b> .....	245
<i>Ajune Wanis Ismail, Mohd Shahrizal Sunar</i>	

<b>Learning to Play Tetris from Examples</b> .....	255
<i>Somnuk Phon-Amnuaisuk</i>	

## Sports and Health Informatics

<b>Advances in Sports Informatics Research</b> .....	265
<i>Martin Sykora, Paul Wai Hing Chung, Jonathan P. Folland, Benjamin J. Halkon, Eran A. Edirisinghe</i>	

<b>Experiments in the Application of Computer Vision for Ball and Event Identification in Indoor Sports</b> .....	275
<i>Kevin M. Oldham, Paul Wai Hing Chung, Eran A. Edirisinghe, Benjamin J. Halkon</i>	

<b>Semi-automatic, Landmark-Based Feedback Generation for Stand-Up Exercises</b> .....	285
<i>Pablo Fernández de Dios, Paul Wai Hing Chung, Qinggang Meng</i>	

## **Ubiquitous Computing**

<b>A Survey on Energy-Aware Profiler for Mobile Devices</b> .....	295
<i>Muhammad Hanif Jofri, Mohd Farhan Md Fudzee, Mohd Norasri Ismail</i>	
<b>Operational Rules for Implementing Sincere Software Agents in Corrective and Preventive Actions Environment</b> .....	307
<i>Nur Huda Jaafar, Mohd Sharifuddin Ahmad, Azhana Ahmad</i>	
<b>A Survey on Distributed Service Discovery Mechanisms with the Focus on Topology Awareness</b> .....	315
<i>Mohd Saleem Nazmudeen, Seyed Mohamed Buhari</i>	
<b>Ubiquitous Shift with Information Centric Network Caching Using Fog Computing</b> .....	327
<i>Ibrahim Abdullahi, Suki Arif, Suhaidi Hassan</i>	
<b>Cloud Location Verification and Adversary Identification</b> .....	337
<i>Asadullah Al Galib, Rashedur Mohammad Rahman</i>	
<b>AutiSay: A Mobile Communication Tool for Autistic Individuals</b> .....	349
<i>Nyuk Hiong Voon, Siti Nor Bazilah, Abdullah Maidin, Halina Jumaat, Muhammad Zulfadhli Ahmad</i>	
<b>Author Index</b> .....	361