

Studies in Computational Intelligence

Volume 569

Series editor

Janusz Kacprzyk, Polish Academy of Sciences, Warsaw, Poland
e-mail: kacprzyk@ibspan.waw.pl

About this Series

The series “Studies in Computational Intelligence” (SCI) publishes new developments and advances in the various areas of computational intelligence—quickly and with a high quality. The intent is to cover the theory, applications, and design methods of computational intelligence, as embedded in the fields of engineering, computer science, physics and life sciences, as well as the methodologies behind them. The series contains monographs, lecture notes and edited volumes in computational intelligence spanning the areas of neural networks, connectionist systems, genetic algorithms, evolutionary computation, artificial intelligence, cellular automata, self-organizing systems, soft computing, fuzzy systems, and hybrid intelligent systems. Of particular value to both the contributors and the readership are the short publication timeframe and the world-wide distribution, which enable both wide and rapid dissemination of research output.

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Roger Lee
Editor

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Roger Lee
Software Engineering & Information
Technology Institute
Central Michigan University
USA

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Preface

The purpose of the 15th IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD 2014) held on June 30 – July 2, 2014 in Las Vegas Nevada, USA, is aimed at bringing together researchers and scientists, businessmen and entrepreneurs, teachers and students to discuss the numerous fields of computer science, and to share ideas and information in a meaningful way. This publication captures 13 of the conference's most promising papers, and we impatiently await the important contributions that we know these authors will bring to the field.

In chapter 1, Junping Song, Haibo Wang, Pin Lv, Shangzhou Li, and Menglu Xu propose a data mining based publish/subscribe system (DMPSS). The experimental results show that DMPSS realizes even matching load distribution, and it reduces the overhead for message transmission and latency dramatically.

In chapter 2, Umme Habiba, Rahat Masood and Muhammad Awais Shibli propose a secure identity management system for federated Cloud environments that not only ensures the secure management of identity credentials, but preserves the privacy of Cloud Service Consumers (CSC) also. The results of their evaluation certify that the presented work ensures the desired features and level of security as expected from a secure identity management system for federated Cloud environment.

In chapter 3, Abdulmohsen Al-Thubaity, Muneera Alhoshan, and Itisam Hazzaa conducted studies on the effect of using word N-grams (N consecutive words) on ATC accuracy. Their results show that the use of single words as a feature provides greater classification accuracy (CA) for ATC compared to N-grams.

In chapter 4, Mohammad Hadi Valipour, Khashayar Niki Maleki and Saeed Shiry Ghidary propose a new approach in order to control unstable systems or systems with unstable equilibrium. Evaluation measures in simulation results show the improvement of error reduction and more robustness than a basic tuned double-PID controller for this task.

In chapter 5, Yadu Gautam, Carl Lee , Chin-I Cheng, and Carl Langefeld study the performance of the MiDCoP approach using association analysis based on the

imputed allele frequency by analyzing the GAIN Schizophrenia data. The results indicate that the choice of reference sets has strong impact on the performance.

In chapter 6, Soumya Saha and Lifford McLauchlan propose an approach to construct weighted minimum spanning tree in wireless sensor networks. Simulation results demonstrate significant improvement for both load balancing and number of message deliveries after implementation of the proposed algorithm.

In chapter 7, Taku Jiomaru, Tetsuo Kosaka, and Tokuro Matsuo collected answers of each learner for knowing element of difficulty level in Mathematics, and identified 10 types.

In chapter 8, Lifeng Zhang, Akira Yamawaki and Seiichi Serikawa propose an approach to identify and exterminate a specialized invasive alien fish species, the black bass. Simulation result shows a reasonable possibility for identify a black bass from other fish species.

In chapter 9, Nermin Kajtazovic, Christopher Preschern, Andrea Holler and Christian Kreiner present a novel approach for verification of compositions for safety-critical systems, based on data semantics of components. They show that CSP can be successfully applied for verification of compositions for many types of properties.

In chapter 10, Mitsuo Wakatsuki, Etsuji Tomita, and Tetsuro Nishino study a subclass of deterministic pushdown transducers, called deterministic restricted one-counter transducers (droct's), and studies the equivalence problem for droct's which accept by final state.

In chapter 11, Hiroki Nomiya, Atsushi Morikuni, and Teruhisa Hochin propose a emotional scene detection in order to retrieve impressive scenes from lifelog videos. The detection performance of the proposed method is evaluated through an emotional scene detection experiment.

In chapter 12, Takafumi Nakanishi presents a new knowledge extraction method on Big Data Era. In this paper, he especially focus on an aspect of heterogeneity. He discovers a correlation in consideration of the continuity of time.

In chapter 13, Golnoush Abaei and Ali Selamat propose a new method is proposed to increase the accuracy of fault prediction based on fuzzy clustering and majority ranking. The results show that their systems can be used to guide testing effort by prioritizing the module's faults in order to improve the quality of software development and software testing in a limited time and budget.

It is our sincere hope that this volume provides stimulation and inspiration, and that it will be used as a foundation for works to come.

Guest Editors

June 2014

Ju Yeon Jo

University of Nevada-Las Vegas, U.S.A

Satoshi Takahashi

University of Electro-Communications, Japan

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List of Contributors

Golnoush Abaei

University Technology Malaysia,
Malaysia
golnoosh.abae@gmail.com

Abdulmohsen Al-Thubaity

KACST, Saudi Arabia
aalthubaity@kacst.edu.sa

Muneera Alhoshan

KACST, Saudi Arabia
malhawshan@kacst.edu.sa

Chin-I Cheng

Central Michigan University, USA
cheng3c@cmich.edu

Yadu Gautam

Central Michigan University, USA
gautalyn@cmich.edu

Umme Habiba

School of Electrical Engineering and
Computer Science, Pakistan
11msccsuhabiba@seecs.edu.pk

Itisam Hazzaa

KACST, Saudi Arabia
429202034@student.ksu.
edu.sa

Teruhisa Hochin

Kyoto Institute of Technology, Japan
hochin@kit.ac.jp

Andrea Holler

Graz University of Technology, Austria
andrea.hoeller@tugraz.at

Taku Jiromaru

Yamagata University, Japan
jiro@om-edu.jp

Nermin Kajtazovic

Graz University of Technology, Austria
nermin.kajtazovic@tugraz.at

Tetsuo Kosaka

Yamagata University, Japan
tkosaka@yz.yamagata-u.ac.jp

Christian Kreiner

Graz University of Technology, Austria
christian.kreiner@tugraz.at

Carl Langefeld

Wake Forest University, USA
clangefe@wfubmc.edu

Carl Lee

Central Michigan University, USA
carl.lee@cmich.edu

Shangzhou Li

ISCAS, China

lishangzhou2012@sina.com

Pin Lv

ISCAS, China

lvpin@iscas.ac.cn

Rahat Masood

School of Electrical Engineering and

Computer Science, Pakistan

rahat.masood@seecs.edu.pk

Tokuro Matsuo

Advanced Institute of Industrial

Technology, Japan

matsuo@tokuro.net

Lifford McLaughlan

Texas A&M University, USA

lifford.mclaughlan@tamuk.edu

Atsushi Morikuni

Kyoto Institute of Technology, Japan

m2622043@edu.kit.ac.jp

Takafumi Nakanishi

International University of Japan, Japan

takafumi@glocom.ac.jp

Khashayar Niki Maleki

University of Tulsa, Iran

kh.niki.m@gmail.com

Hiroki Nomiya

Kyoto Institute of Technology, Japan

nomiya@kit.ac.jp

Christopher Preschern

Graz University of Technology, Austria

christopher.preschern@

tugraz.at

Soumya Saha

Texas A&M University, USA

jishumail@gmail.com

Ali Selamat

University Technology Malaysia,

Malaysia

aselamat@utm.my

Seiichi Serikawa

Kyushu Institute of Technology, Japan

serikawa@elcs.kyutech.ac.jp

Muhammad Awais Shibli

School of Electrical Engineering and

Computer Science, Pakistan

awais.shibli@seecs.edu.pk

Saeed Shiry Ghidary

Amirkabir University of Technology,

Iran

shiiry@aut.ac.ir

Junping Song

ISCAS, China

junping@iscas.ac.cn

Etsuji Tomita

The University of Electro-

Communications, Japan

tomita@uec.ac.jp

Mohammad Hadi Valipour

Amirkabir University of Technology

Iran

valipour@aut.ac.ir

Mitsuo Wakatsuki

The University of Electro-

Communications, Japan

wakatsuki.mitsuo@uec.ac.jp

Haibo Wang

ISCAS, China

haibo@iscas.ac.cn

Menglu Xu

ISCAS, China

lumengxu@gmail.com

Akira Yamawaki

Kyushu Institute of Technology, Japan
yama@elcs.kyutech.ac.jp

Lifeng Zhang

Kyushu Institute of Technology, Japan
zhang@elcs.kyutech.ac.jp