

# WSEAS Transactions on Information Science and Applications

Contents: 2016  
Print ISSN: 1790-0832  
E-ISSN: 2224-3402

**Acceptance Rate (for the years 2013 and 2014): 13.07%**

Acceptance Rate =  $C/D$  where: C = the number of accepted papers, D= the number of submitted papers. Withdrawn Papers are not considered for the numbers C and D.

## Editorial Board:

### Professor Klimis Ntalianis

Technological Educational Institute of Athens  
Greece  
E-mail: [kntal@image.ntua.gr](mailto:kntal@image.ntua.gr)

### Associate Editors:

Prof. Kleanthis Psarris, The City University of New York, USA  
[URL](#), Email: [KPsarris@brooklyn.cuny.edu](mailto:KPsarris@brooklyn.cuny.edu)

Prof. Jain-Shing Wu, National Sun Yat-Sen University, Kaohsiung, Taiwan  
[URL](#), Email: [wujs@cse.nsysu.edu.tw](mailto:wujs@cse.nsysu.edu.tw)

Prof. Josip Music, University of Split, Croatia  
[URL](#), Email: [jmusic@fesb.hr](mailto:jmusic@fesb.hr)

Prof. Maurice Margenstern, Université de Lorraine, France  
[URL](#) and [URL](#), Email: [maurice.margenstern@univ-lorraine.fr](mailto:maurice.margenstern@univ-lorraine.fr)

Prof. Manuela Panoiu, University Politehnika Timisoara, Timisoara, Romania  
[URL](#), Email: [m.panoiu@fih.upt.ro](mailto:m.panoiu@fih.upt.ro)

Prof. Eleonora Catsigeras, University de La Republica, Uruguay  
[URL](#), Email: [eleonora@fing.edu.uy](mailto:eleonora@fing.edu.uy)

Prof. Claudio Talarico, Gonzaga University, Spokane, WA, USA  
[URL](#), Email: [talarico@gonzaga.edu](mailto:talarico@gonzaga.edu)

Prof. Zhuo Li, Beijing University of Technology, Beijing, China  
[URL](#), Email: [zhvoli@bjut.edu.cn](mailto:zhvoli@bjut.edu.cn)

Prof. Pavel Varacha, Tomas Bata University in Zlin, Czech Republic  
[URL](#), Email: [varacha@fai.utb.cz](mailto:varacha@fai.utb.cz)

Prof. Charles Suffel, Stevens Institute of Technology, Hoboken, NJ, USA

[URL](#), Email: [csuffel@stevens.edu](mailto:csuffel@stevens.edu)

Prof. Shuliang Li, The University of Westminster, London, UK

[URL](#), Email: [S.Li05@westminster.ac.uk](mailto:S.Li05@westminster.ac.uk)

Prof. Constantin Popescu, Oradea University, Oradea, Romania

[URL](#), Email: [cpopescu@uoradea.ro](mailto:cpopescu@uoradea.ro)

Prof. Kun Chang Lee, Sungkyunkwan University, Korea

[URL](#), Email: [leekc@skku.edu](mailto:leekc@skku.edu)

### Topics:

Embedded systems Firmware for electric motors Microprocessor programming for control of electric motors Computer Languages and Applications Information Theory and Applications Complexity Theory and Applications Computing Theory and Applications Software Engineering Web-Based Engineering Web-Based Government Web-Based Commerce Data Structures and Web Applications File Structures and Design Data Bases and Web Applications Knowledge Engineering and Data Technology File Structures for on-line Systems Operating Systems and Internet Parallel and Distributed Systems Algorithms. Internet Computing. Mobile Computing Object-Oriented Programming Computer Architecture Computer Packaging Fault Tolerance Computing Parallel Programming Microprocessors and microcomputers Numerical Analysis Game Theory Operations Research Optimization Techniques Soft Computing Industrial Applications of Informatics and Real Time Systems Multimedia Simulation Virtual Reality Computer Graphics Computational Geometry Machine Vision Computer Algebra Symbolic Computation Pattern Analysis Simulation Machine Intelligence Adaptive and Learning Systems Classification Identification Analysis and design tools Emulation Visualization Digital Libraries Libraries' categorization Hardware Engineering Programming Techniques in Communications Networks Security Anti-hacking techniques Evaluation of commercial software Software Maintenance

### Articles:

[GPS/SINS Navigation Method of Unmanned Aerial Vehicles Based on Vision Aids](#) 11

Authors: Zhou Jianming

[Web Geoinformatics for Creating Schema & Interface for Mapping With Distributed GIS: Geomatics for Sustainable Societies](#) 23

Authors: Devanjan Bhattacharya, Hakan Senol Kutoglu

[The Application of SVM and GA-BP Algorithms in Stock Market Prediction](#) 31

Authors: Hongxin Xue, Yanping Bai

[The Connection of System SMPSL \(System for Measurement Using a Computer in](#) 37

<a href="#"><u>the School Laboratory) and CAA (Computer Aided Assessment) for Demonstration of Mathematical Modeling of Angle</u></a>	
Authors: Radek Nemeč, Andrea Berková, Pavla Hanzalová	
<a href="#"><u>Model and Algorithm of Artificial Immune System for the Recognitions of Single Symbol and their Comparison with Existing Methods</u></a>	45
Authors: I. F. Astachová, S. A. Ushakov, Ju. V. Hitskova	
<a href="#"><u>Multi Agent System for Continuously Improving Enterprise Performance</u></a>	59
Authors: Arwa Ibrahim Ahmed	
<a href="#"><u>Reliability and Performance Assessment of Multifarious Hybrid Cryptosystems</u></a>	71
Authors: Ijaz Ali Shoukat, Abdullah Al-Dhelaan, Mznah Al-Rodhaan, Kamalrulnizam Abu Bakar, Subariah Ibrahim	
<a href="#"><u>System Dynamics Modeling and Simulation on Medical Service Pricing of Government and Hospitals Co-Decision</u></a>	79
Authors: Yabin Li, Hong Lu, Xiaohui Xing	
<a href="#"><u>PaSSIL: A New Keystroke Dynamics System for Password Strengthening Based on Inductive Learning</u></a>	92
Authors: Saleh M. Abu-Soud	
<a href="#"><u>The Centrality Ranking Algorithm Based on the Network Structure</u></a>	104
Authors: Kai Zhang, Yinghong Ma	
<a href="#"><u>Research of Quality of Life of Informatics Students Through Innovative Application</u></a>	117
Authors: Věra Strnadová, Petr Voborník, Kateřina Provazníková	
<a href="#"><u>Detection Ventricular Tachycardia and Fibrillation Using the Lempel-Ziv Complexity and Wavelet Transform</u></a>	125
Authors: Qingfang Meng, Deling Xia, Qiang Zhang, Zaiguo Zhang	
<a href="#"><u>Expansion of Game Refinement Theory into Continuous Movement Games: A Comparison of Two Video Games</u></a>	133
Authors: Norizan Mat Diah, Arie Pratama Sutiono, Long Zuo, Nathan Nossal, Hiroyuki Iida, Nor Azan Mat Zin	
<a href="#"><u>Application of Rasch Model in Evaluating the Reliability and Quality of Examination Paper for Object-Oriented Design Course</u></a>	140
Authors: Zuhaira Muhammad Zain	
<a href="#"><u>MS Excel Spreadsheet as a Tool for Mathematical Modeling and Computer Simulation of Simple Permutation Brainteaser</u></a>	147
Authors: Michal Musilek, Stepan Hubalovsky, Marie Hubalovska	