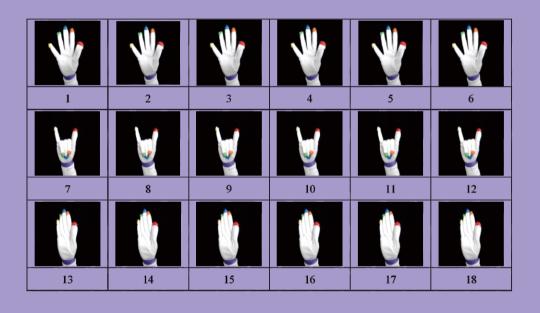




Journal of Intelligent Learning Systems and Applications



Journal Editorial Board

ISSN Print: 2150-8402 ISSN Online: 2150-8410 http://www.scirp.org/journal/jilsa

Editors-in-Chief

Dr. Steve S. H. Ling University of Technology Sydney, Australia

Prof. Xin Xu National University of Defense Technology, China

Editorial Advisory Board

Prof. Hengda ChengUtah State University, USADr. Haibo HeUniversity of Rhode Island, USA

Prof. Rob Law Hong Kong Polytechnic University, China

Prof. Mengchi LiuCarleton University, CanadaProf. Yi PanGeorgia State University, USAProf. Simon X. YangUniversity of Guelph, CanadaProf. Shi YingWuhan University, China

Editorial Board (According to Alphabet)

Dr. Chee Seng Chan University of Portsmouth, UK

Dr. Christos Dimitrakakis University of Asmterdam, Netherlands

Prof. David Greenhalgh University of Strathclyde, UK

Prof. Kao-Shing Hwang National Sun Yat-sen University, Chinese Taipei

Dr. Michail G. Lagoudakis Technical University of Crete, Greece

Prof. Shutao Li Hunan University, China

Prof. Kin Huat Low Nanyang Technological University, Singapore

Dr. Amir Hooshang MazinanIslamic Azad University, IranDr. Vincenzo PacelliUniversity of Foggia, ItalyProf. George PanayiotakisUniversity of Patras, GreeceDr. Jan PetersMax Planck Institute, GermanyProf. Theodore B. TrafalisThe University of Oklahoma, USAProf. Evangelos TriantaphyllouLouisiana State University, USADr. Jue WangChinese Academy of Sciences, China

Dr. Wei Zhong University of South Carolina Upstate, USA

Prof. Dingxuan ZhouCity University of Hong Kong, China

Prof. Antanas Zilinskas Institute of Mathematics and Informatics, Lithuania

Managing Executive Editors

Dr. Tao BanNational Institute of Information and Communications Technology, Japan

Editorial Assistant

Tian Huang Scientific Research Publishing, USA Email: jilsa@scirp.org



TABLE OF CONTENTS

Volume 4	Number 1	February 2012

Differential Evolution Using Opposite Point for Global Numerical Optimization	
Y. Y. Ao, H. Q. Chi	1
A Comparative Study of Nonlinear Time-Varying Process Modeling Techniques: Application to Chemical Reactor	
E. Ayachi, S. Ihsen, B. Mohamed.	20
A Fuzzy Expert System Architecture for Intelligent Tutoring Systems: A Cognitive Mapping Approach	
M. H. F. Zarandi, M. Khademian, B. Minaei-Bidgoli, I. B. Türkşen.	29
Recognition of Arabic Sign Language (ArSL) Using Recurrent Neural Networks	
M. Maraqa, F. Al-Zboun, M. Dhyabat, R. Abu Zitar.	41
Design of Fuzzy Controller for Robot Manipulators Using Bacterial Foraging Optimization Algorithm	
M. Aghajarian, K. Kiani, M. M. Fateh.	53
An Intelligent Assessment Tool for Students' Java Submissions in Introductory Programming Courses	
F. Al Shamsi, A. Elnagar	59
An Improved Genetic Algorithm for Crew Pairing Optimization	
R. Zaran, İ. Özkol	70

The figure on the front cover is from the article published in Journal of Intelligent Learning Systems and Applications, 2012, Vol. 4, No. 1, pp. 41-52 by Manar Maraqa, Farid Al-Zboun, Mufleh Dhyabat and Raed Abu Zitar.

Copyright © 2012 SciRes.

Journal of Intelligent Learning Systems and Applications (JILSA)

Journal Information

SUBSCRIPTIONS

The Journal of Intelligent Learning Systems and Applications (Online at Scientific Research Publishing, www.SciRP.org) is published quarterly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$59 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: sub@scirp.org

SERVICES

Advertisements

Advertisement Sales Department, E-mail: service@scirp.org

Reprints (minimum quantity 100 copies)

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: sub@scirp.org

COPYRIGHT

Copyright©2012 Scientific Research Publishing, Inc.

All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as described below, without the permission in writing of the Publisher.

Copying of articles is not permitted except for personal and internal use, to the extent permitted by national copyright law, or under the terms of a license issued by the national Reproduction Rights Organization.

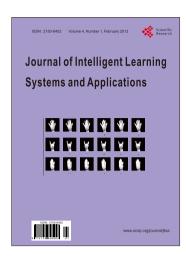
Requests for permission for other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works or for resale, and other enquiries should be addressed to the Publisher.

Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assumes no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact:

E-mail: jilsa@scirp.org



Journal of Intelligent Learning Systems and Applications

ISSN Print: 2150-8402 ISSN Online: 2150-8410

www.scirp.org/journal/jilsa

The Journal of Intelligent Learning Systems and Applications (JILSA) is a peer reviewed international journal with a key objective to provide the academic and industrial community a medium for presenting original cutting-edge research related to intelligent learning systems and their applications. JILSA invites authors to submit their original and unpublished work that communicates current research on intelligent learning systems both in the theoretical and methodological aspects, as well as various applications in real-world applications.

Papers are invited on the topics including, but not limited to:

- Approximate Dynamic Programming
- Autonomic Computing
- Autonomous Learning Systems
- Bio-Inspired Learning Method
- Clustering
- Cyber-Physical Systems
- Evolutionary Computation
- Filter Bank
- Fuzzy and Rough Set
- General Theory on Intelligent Learning Systems
- Intelligent Applications
- Learning Control Systems
- Multi-Agent Learning
- Multiple Models Strategy

- Neural Networks
- Pattern Recognition Based on Learning Techniques
- Predictive Control
- Recommendation System
- Reinforcement Learning
- Robotics
- Smart Grid Techniques and Applications
- Social Network Analysis
- Statistical Learning Theory
- Supervised Learning
- Time-Frequency Representation
- Unsupervised Learning
- User Behavior Modelling
- Wavelet Theory

Editors-in-Chief

Dr. Steve S. H. Ling University of Technology Sydney, Australia

Prof. Xin Xu National University of Defense Technology, China

Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submissions, please access the website.

Website and E-Mail

http://www.scirp.org/journal/jilsa E-Mail: jilsa@scirp.org