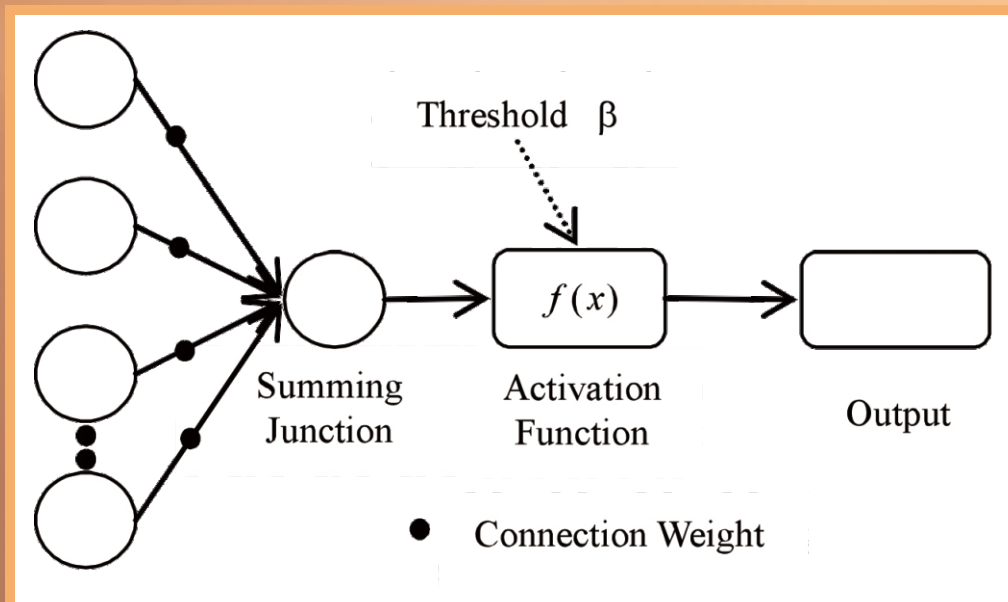


American Journal of Operations Research



Journal Editorial Board

ISSN 2160-8830 (Print) ISSN 2160-8849 (Online)

<http://www.scirp.org/journal/ajor>

Editor in Chief

Prof. Jinfeng Yue

Middle Tennessee State University, USA

Editorial Advisory Board

Prof. Bintong Chen
Prof. Wade D. Cook
Prof. William W. Cooper
Prof. Shu-Cherng Fang
Prof. Panos Kouvelis
Prof. Lawrence M. Seiford
Prof. Suresh P. Sethi

University of Delaware, USA
York University, Canada
University of Texas at Austin, USA
North Carolina State University, USA
Washington University in St. Louis, USA
University of Michigan, USA
University of Texas at Dallas, USA

Editorial Board

Dr. Javier De Andrés
Prof. Janine E. Aronson
Dr. Annamaria Barbagallo
Dr. Nabil Belacel
Prof. Ignacio Castillo
Prof. Xu Chen
Prof. Muhammad El-Taha
Dr. Vladimir Filipović
Dr. Carmen Galé
Dr. Xianghua Gan
Dr. Xiuli He
Prof. Mhand Hifi
Prof. Zhimin Huang
Prof. Zhibin Jiang
Dr. Ricardo Josa-Fombellida
Prof. Dennis Leech
Prof. Deng-Feng Li
Prof. Liang Liang
Dr. Pedro Lorca
Dr. Zhaosong Lu
Prof. Monga Kalonda Luhandjula
Prof. Charles L. Munson
Dr. Jamal Ouenniche
Prof. Joaquín Antonio Pacheco Bonrostro
Prof. Gregory P. Prastacos
Prof. Javier Ramirez Rodriguez
Prof. Bhaba R. Sarker
Prof. Renduchintala Raghavendra Kumar Sharma
Dr. Chunming (Victor) Shi
Prof. Andranik Tangian
Prof. Etsuji Tomita
Dr. Delfim F. M. Torres
Prof. Evangelos Triantaphyllou
Dr. Manish Verma
Dr. Yu Amy Xia
Prof. Yi-Min Xie
Prof. Farouk Yalaoui
Dr. Jiping Yang
Dr. Shilei Yang
Prof. Peng-Yeng Yin
Dr. Xiaohang Yue
Dr. Bin Zhang

University of Oviedo, Spain
University of Georgia, USA
University of Naples "Federico II", Italy
NRC Institute for Information Technology, Canada
Wilfrid Laurier University, Canada
University of Electronic Science and Technology of China, China
University of Southern Maine, USA
University of Belgrade, Serbia
University of Zaragoza, Spain
The Hong Kong Polytechnic University, China
The University of North Carolina at Charlotte, USA
University of Picardie Jules Verne, France
Adelphi University, USA
Shanghai Jiao Tong University, China
University of Valladolid, Spain
University of Warwick, UK
Fuzhou University, China
University of Science and Technology of China, China
University of Oviedo, Spain
Simon Fraser University, Canada
University of South Africa, South Africa
Washington State University, USA
University of Edinburgh, UK
University of Burgos, Spain
Athens University of Economics and Business, Greece
The Metropolitan Autonomous University, Mexico
Louisiana State University, USA
IIT Kanpur, India
Wilfrid Laurier University, Canada
Karlsruhe Institute of Technology, Germany
The University of Electro-Communications, Japan
University of Aveiro, Portugal
Louisiana State University, USA
Memorial University of Newfoundland, Canada
Northeastern University, USA
RMIT University, Australia
University of Technology of Troyes, France
Beihang University, China
Southwestern University of Finance and Economics, China
National Chi Nan University, Chinese Taipei
University of Wisconsin-Milwaukee, USA
Sun Yat-sen University, China

Guest Reviewers

Jose Humberto Ablanado-Rosas
Lingyan Cao
Yuan-Shyi Peter Chiu
Petr Ya. Ekel
Wang-Ting Hu
Vassilis Kostoglou
Ulrike Leopold-Wildburger
Chih-Chin Liang
Pedro Lorca

Fabrizio Marinelli
V.N. Maurya
Frank Meisel
Jerzy Michnik
Ahmed Nait-Sidi-Moh
Hussein Naseraldin
Alain Pietrus
Han Qiao
Andre Rossi

Zhenjun Shi
Xiang Song
Nodari Vakhania
Tao Wu
Gongxian Xu
Zixiang Xu
Takeo Yamada
Xiaoning Zhang

TABLE OF CONTENTS

Volume 3 Number 2

March 2013

Forecasting on Crude Palm Oil Prices Using Artificial Intelligence Approaches

A. A. Karia, I. Bujang, I. Ahmad.....259

A Particle Swarm Optimization Algorithm for a 2-D Irregular Strip Packing Problem

M. A. Shalaby, M. Kashkoush.....268

Optimal Approximation Algorithms for Reoptimization of Constraint Satisfaction Problems

V. A. Mikhailiuk.....279

Generating Efficient Solutions in Bilevel Multi-Objective Programming Problems

C. O. Pieume, P. Marcotte, L. P. Fotso, P. Siarry.....289

Trapezoidal Approximation of a Fuzzy Number Preserving the Expected Interval and Including the Core

B. Asady.....299

Comparison of Different Confidence Intervals of Intensities for an Open Queueing Network with Feedback

V. K. Gedam, S. B. Pathare.....307

The figure on the front cover is from the article published in American Journal of Operations Research, 2013, Vol. 3, No. 2, pp. 259-267 by Abdul Aziz Karia, Imbarine Bujang and Ismail Ahmad.

American Journal of Operations Research (AJOR)

Journal Information

SUBSCRIPTIONS

The *American Journal of Operations Research* (Online at Scientific Research Publishing, www.SciRP.org) is published bimonthly 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©2013 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 assume 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: ajor@scirp.org



American Journal of Operations Research

ISSN 2160-8830 (Print) ISSN 2160-8849 (Online)
<http://www.scirp.org/journal/ajor>

AJOR is an international scientific journal dedicated to the publication and public discussion of high quality, original papers that contribute to the methodology of operational research and to the practice of decision making.

Editor in Chief

Prof. Jinfeng Yue

Middle Tennessee State University, USA

Editorial Board

Dr. Javier De Andrés
 Prof. Janine E. Aronson
 Dr. Annamaria Barbagallo
 Dr. Nabil Belacel
 Prof. Ignacio Castillo
 Prof. Xu Chen
 Prof. Muhammad El-Taha
 Dr. Vladimir Filipović
 Dr. Carmen Galé
 Dr. Xianghua Gan
 Dr. Xiuli He
 Prof. Mhand Hifi
 Prof. Zhimin Huang
 Prof. Zhibin Jiang

Dr. Ricardo Josa-Fombellida
 Prof. Dennis Leech
 Prof. Deng-Feng Li
 Prof. Liang Liang
 Dr. Pedro Lorca
 Dr. Zhaosong Lu
 Prof. Monga Kalonda Luhandjula
 Prof. Charles L. Munson
 Dr. Jamal Ouenniche
 Prof. Joaquin Antonio Pacheco Bonrosto
 Prof. Gregory P. Prastacos
 Prof. Javier Ramirez Rodriguez
 Prof. Bhaba R. Sarker
 Prof. Renduchintala Raghavendra Kumar Sharma

Dr. Chunming (Victor) Shi
 Prof. Andranik Tangian
 Prof. Etsuji Tomita
 Dr. Delfim F. M. Torres
 Prof. Evangelos Triantaphyllou
 Dr. Manish Verma
 Dr. Yu Amy Xia
 Prof. Yi-Min Xie
 Prof. Farouk Yalaoui
 Dr. Jiping Yang
 Dr. Shilei Yang
 Prof. Peng-Yeng Yin
 Dr. Xiaohang Yue
 Dr. Bin Zhang

Subject Coverage

This journal invites original research and review papers that address the following issues in operations research. Topics of interest include, but are not limited to:

1. Operations Research and Optimization Theory and Research Technical Approaches

Computational Intelligence and Information Management
 Continuous Optimization
 Decision Support Systems, Multi-Criteria Decision Methods
 Discrete Optimization
 Expert Systems
 Heuristics Mathematical Programming
 Networks
 Queues
 Simulation
 Stochastic Models and Statistics
 Time Series Analysis

2. Manufacturing and Service Operations Research

Forecasting
 Inventory
 Location
 Logistics, Transportation Warehousing and Maintenance
 Planning and Scheduling

Product and Service Design
 Project Management
 Quality Management
 Revenue Management
 Supply Chain Management

3. Interfaces with Other Disciplines

Community Operations Research
 Education Operations Research
 Environmental and Energy Issues
 Financial Engineering
 Government Operations Research
 Health Services Operations Research
 Marketing Science
 Military and Homeland Security
 Operations Research in Nonprofit Organization
 Policy Modeling and Public Sector OR
 Productivity and Efficiency in the Public Sector
 Sports Operations Research
 Telecommunications and Networking

We are also interested in short papers (letters) that clearly address a specific problem, and short survey or position papers that sketch the results or problems on a specific topic. Authors of selected short papers would be invited to write a regular paper on the same topic for future issues of the AJOR.

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/ajor>

E-mail: ajor@scirp.org