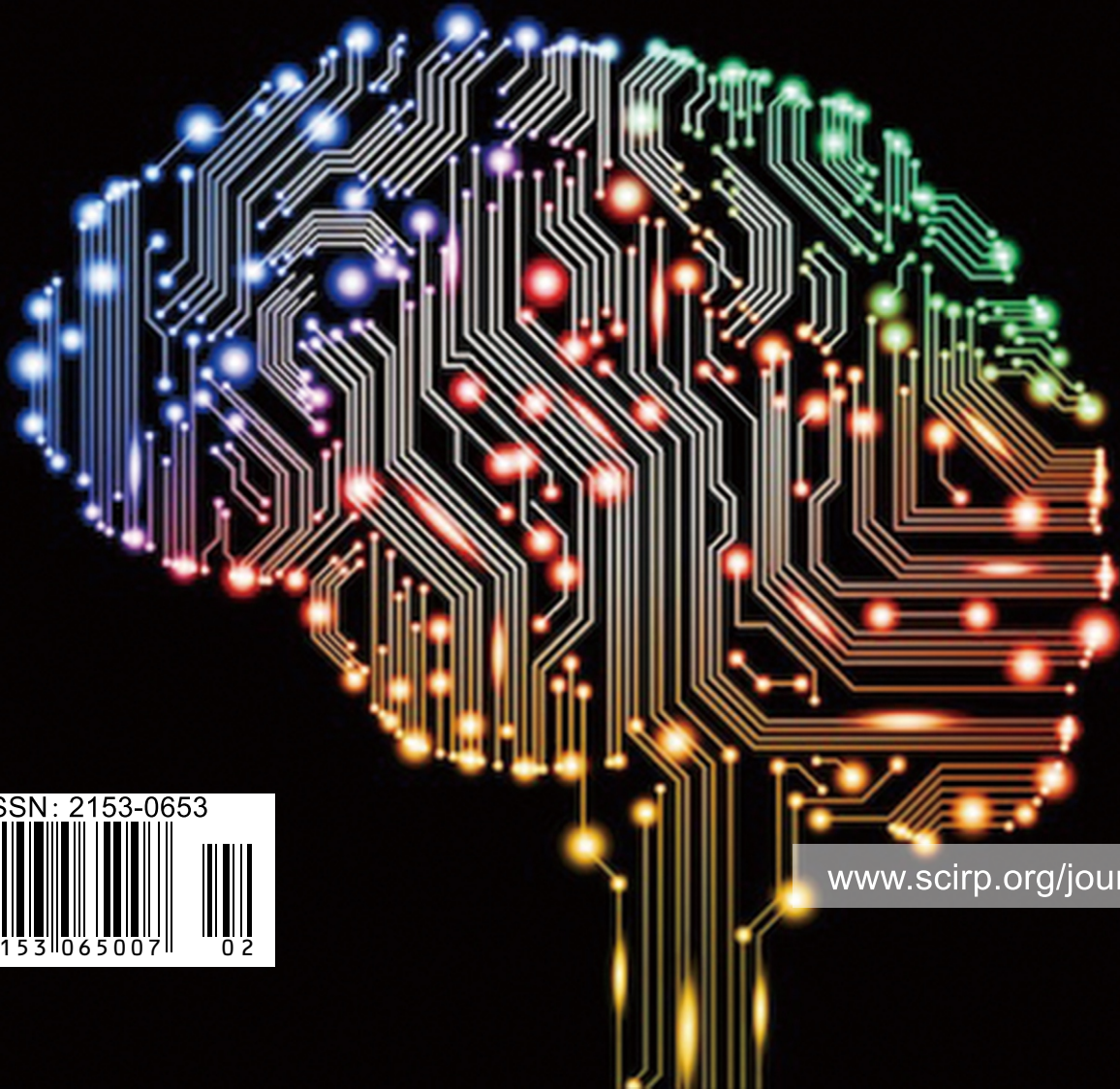


ISSN: 2153-0653 Volume 8, Number 2, May 2017



# Intelligent Control and Automation



ISSN: 2153-0653



[www.scirp.org/journal/ica](http://www.scirp.org/journal/ica)

# Journal Editorial Board

ISSN Print: 2153-0653 ISSN Online: 2153-0661  
<http://www.scirp.org/journal/ica>

---

## Editor-in-Chief

**Prof. Theodore B. Trafalis** University of Oklahoma, USA

## Editorial Board

<b>Prof. Pablo Cortés Achedad</b>	University of Seville, Spain
<b>Prof. Jan Awrejcewicz</b>	The Lodz University of Technology, Poland
<b>Dr. Mohammed Chadli</b>	University of Picardie Jules Verne, France
<b>Prof. Zoran Gajic</b>	Rutgers University, USA
<b>Prof. Yanxiang He</b>	Wuhan University, China
<b>Prof. Piotr Kulczycki</b>	Polish Academy of Sciences, Poland
<b>Prof. Akihiko Kumagai</b>	California State University, USA
<b>Prof. Amalendu Mukherjee</b>	Indian Institute of Technology, India
<b>Dr. Chang-Woo Park</b>	Korea Electronics Technology Institute, South Korea
<b>Prof. Dilip Kumar Pratihara</b>	Indian Institute of Technology, India
<b>Dr. Jianbin Qiu</b>	Harbin Institute of Technology, China
<b>Prof. Yung C. Shin</b>	Purdue University, USA
<b>Dr. José Reinaldo Silva</b>	University of São Paulo, Brazil
<b>Dr. Ronglong Wang</b>	University of Fukui, Japan
<b>Prof. Wai-Keung Wong</b>	Hong Kong Polytechnic University, China
<b>Prof. Ruey-Fang Yu</b>	National United University, Chinese Taipei

# Table of Contents

**Volume 8    Number 2**

**May 2017**

## **Temperature Calculation of Pellet Rotary Kiln Based on Texture**

C. L. Lin, Y. F. Wu.....67

## **Discretization of Fractional Order Differentiator and Integrator with Different Fractional Orders**

Q. Zhang, B. Y. Song, H. D. Zhao, J. S. Zhang.....75

## **Synchronization of Chaotic Systems via Active Disturbance Rejection Control**

F. A. Khadra.....86

## **Recommended Design and Direction of Development for Humanoid Nursing Robots Perspective from Nursing Researchers**

T. Tanioka, K. Osaka, R. Locsin, Y. Yasuhara, H. Ito.....96

## **Characteristics of a Transactive Phenomenon in Relationships among Older Adults with Dementia, Nurses as Intermediaries, and Communication Robot**

K. Osaka, H. Sugimoto, T. Tanioka, Y. Yasuhara, R. Locsin, Y. R. Zhao, K. Okuda, K. Saito.....111

## **Method of Dynamic VaR and CVaR Risk Measures Forecasting for Long Range Dependent Time Series on the Base of the Heteroscedastic Model**

N. D. Pankratova, N. G. Zrazhevskaya.....126

# Intelligent Control and Automation (ICA)

## Journal Information

### SUBSCRIPTIONS

The *Intelligent Control and Automation* (Online at Scientific Research Publishing, [www.SciRP.org](http://www.SciRP.org)) is published quarterly by Scientific Research Publishing, Inc., USA.

#### Subscription rates:

Print: \$79 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### SERVICES

#### Advertisements

Advertisement Sales Department, E-mail: [service@scirp.org](mailto:service@scirp.org)

#### Reprints (minimum quantity 100 copies)

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

E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### COPYRIGHT

#### Copyright and reuse rights for the front matter of the journal:

Copyright © 2017 by Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY).

<http://creativecommons.org/licenses/by/4.0/>

#### Copyright for individual papers of the journal:

Copyright © 2017 by author(s) and Scientific Research Publishing Inc.

#### Reuse rights for individual papers:

Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

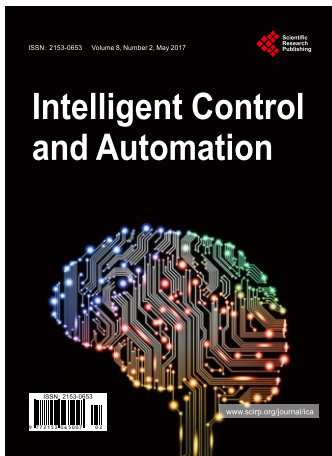
#### Disclaimer of liability

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: [ica@scirp.org](mailto:ica@scirp.org)



# Intelligent Control and Automation (ICA)

ISSN Print: 2153-0653, ISSN Online: 2153-0661

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

Intelligent Control and Automation is an open access, peer-reviewed and fully refereed journal focusing on theories, methods and applications in intelligent control and automation. The goal of this journal is to provide a platform for scientists and academicians all over the world to promote, share, and discuss various new issues and developments in different areas of intelligent control and automation.

## Editor-in-Chief

**Prof. Theodore B. Trafalis**

University of Oklahoma, USA

## Subject Coverage

All manuscripts must be prepared in English, and are subject to a rigorous and fair peer-review process. Accepted papers will immediately appear online followed by printed hard copy. The journal publishes original papers including but not limited to the following fields:

- Adaptive Controls
- Advanced Control Algorithms and Applications
- Artificial Intelligence and Knowledge Engineering
- Automation System
- Autonomous Systems
- Complex Systems and Intelligent Robots
- Complex Systems, Logistics, and Supply Chain
- Computational Intelligence and Applications
- Control Theory and Control Engineering
- Cooperative Controls (Agent Based Systems)
- Distributed Parameter Systems
- Dynamic Data Driven Application Systems in Intelligent Control
- Ecosystems and Control
- Electronic Commerce and Office Automation
- Hybrid Systems
- Industrial Automation and Online Monitoring
- Integrated and Complex Automation Systems
- Intelligent Automation and Manufacturing
- Intelligent Control Theory and Applications
- Intelligent Management and Decision Making
- Mechanical Engineering and Automation
- Modeling, Identification, and Fault Diagnosis
- Navigation Control Theory and Applications
- Network Intelligence and Network Control
- Optimization
- Power Systems and Automation
- Robotics, Service and Medical Robotics
- Soft Computing
- Systems and Control Theory and Applications
- Systems Engineering and Engineering Optimization
- Water and Natural Resource Management

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 *ICA*.

## Notes for Intending Authors

Submitted papers should not be previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers will be peer reviewed. For more details about the submission, please access the website.

## Website and E-Mail

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

E-mail: [ica@scirp.org](mailto:ica@scirp.org)



## ***What is SCIRP?***

Scientific Research Publishing (SCIRP) is one of the largest Open Access journal publishers. It is currently publishing more than 200 open access, online, peer-reviewed journals covering a wide range of academic disciplines. SCIRP serves the worldwide academic communities and contributes to the progress and application of science with its publication.

## ***What is Open Access?***

All original research papers published by SCIRP are made freely and permanently accessible online immediately upon publication. To be able to provide open access journals, SCIRP defrays operation costs from authors and subscription charges only for its printed version. Open access publishing allows an immediate, worldwide, barrier-free, open access to the full text of research papers, which is in the best interests of the scientific community.

- High visibility for maximum global exposure with open access publishing model
- Rigorous peer review of research papers
- Prompt faster publication with less cost
- Guaranteed targeted, multidisciplinary audience



**Scientific  
Research  
Publishing**

**Website: <http://www.scirp.org>**

**Subscription: [sub@scirp.org](mailto:sub@scirp.org)**

**Advertisement: [service@scirp.org](mailto:service@scirp.org)**