NEW TITLE

International Journal of

# Mechatronics and Automation



www.inderscience.com

# Scope of the Journal

IJMA is a fully refereed international journal that presents the state-of-the-art research in the area of mechatronics and industrial automation. The intention of IJMA is to provide an international forum to report latest developments from interdisciplinary theoretical studies, computational algorithm development and practical applications. It particularly welcomes those emerging methodologies and techniques which bridge theoretical studies and applications and have significant potential for real-world applications.

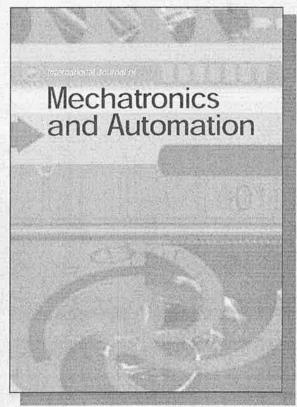
### Contents

IJMA publishes original papers, technical reports, case studies, review papers and tutorials. Special Issues devoted to important topics in advanced mechatronic systems, robotics, control engineering and industrial automation will be published from time to time.

## Subject coverage:

Suitable topics include, but are not limited to:

- Intelligent mechatronics, robotics and biomimetics
- Novel and unconventional mechatronic systems and robots
- Modelling and control of mechatronics systems and robots
- Elements, structures, mechanisms of micro and nano systems
- Sensors, wireless sensor networks and multi-sensor data fusion
- Biomedical and rehabilitation engineering, prosthetics and artificial organs
- Al, neural networks and fuzzy logic in mechatronics and robotics
- Industrial automation, process control and networked control systems
- Telerobotics, human computer interaction, human-robot interaction



www.inderscience.com/ijma

## Members of the Editorial Board

Editor-in-Chief Prof. Shuxiang Guo Kagawa University, Japan

Executive Editor Prof. Huosheng Hu University of Essex, UK

Editorial Board Prof. Martin Adams Nanyang Technological University Singapore

Prof. Gursel Alici University of Wollongong Australia

Prof. Hajime Asama University of Tokyo Japan

Prof. Darwin G Caldwell Italian Institute of Technology Italy

Prof. Fabio Celani Sapienza University of Rome Italy

Prof. Alexander Ferworn Ryerson University Canada

Prof. Toshio Fukuda Nagoya University Japan

**Prof. William R. Hamel** The University of Tennessee, USA

Prof. Dagui Huang University of Electronic Science and Technology of China, China Prof. Jeffrey Johnson Open University UK

Prof. Jong-Hwan Kim KAIST Korea, Republic of

Prof. Chang Liu Northwestern University USA

Prof. Max Meng Chinese University of Hong Kong Hong Kong

Prof. James K. Mills University of Toronto Canada

**Prof. Aiguo Ming**University of Electro-Communications
Japan

**Prof. Nazim Mir-Nasiri** Swinburne University of Technology Malaysia

Prof. T.J. Tarn Washington University in St. Louis USA

Prof. Hong Zhang University of Alberta Canada

Prof. Jianwei Zhang University of Hamburg Germany

# Methods of payment

# What the editors say about IJMA

The new IJMA will cover the area of mechatronics and automation that is currently very important and hot topics. I see that the technology of mechatronics and automation will play a major role in developing new technological products. Hence, I am expecting that the new journal will be a great hit with every researcher who is working on future innovations. It gives a great pleasure to be a part of the IJMA team.

Toshio Fukuda, Nagoya University, Japan

I am honored to be a part of this exciting new journal which addresses an important and emerging area of research, and believe that it will be extraordinarily successful. I am confident that IJMA will have a significant impact in the area of mechatroronics and automation.

T.J. Tarn, Washington University in St. Louis, USA

It is certainly an honor for me to serve as an Editorial Board member for this important new journal. Mechatronics and automation technologies are central in a wide range of expanding industries across the world. IJMA promises to provide both basic and applied researchers a high quality avenue to report their work in this exciting aspect of modern engineering.

William R. Hamel, The University of Tennessee, USA

Mechatronics and industrial automation are at the heart of technological development and it is vital that researchers have high quality publications in which they can rapidly disseminate their results. IJMA will cover a vital and underrepresented area of research and I am confident that it will have a significant impact on the community, quickly becoming a leading journal in this field.

Darwin G Caldwell, Italian Institute of Technology, Italy

I am honored to be invited to serve as an Editorial Board member of this new journal. Under the guidance of Editors and Editorial Board, this new journal will be an important forum for the publication of exciting new developments in emerging technological areas.

James K. Mills, University of Toronto, Canada

The birth of the new journal is a big event in the exciting field of Mechatronics and Automation, and I am very proud to be a part of the strong editorial team that will maintain high quality and standards of all the papers published in it. The IJMA is certainly going to be a vital and unique source of information on the latest theoretical and practical achievements of the researchers in this multidisciplinary and very essential engineering area.

Nazim Mir-Nasiri, Swinburne University of Technology, Malaysia

## To be completed by all subscribers

Terms are payment with order. Payment by cheque, banker's draft or credit card is acceptable.

Name of subscriber
***************************************
31.5733.573.773.673.673.673.673.673.673.673.673.6
Position
Institution
Address
35.444-635146-644-644-644-644-644-644-644-644-644-
Fax
E-mail
Credit card type and number
Expiry date
Three-digit security number (on the reverse of the credit card)
Signature
Date
Please address subscription orders to the

address overleaf

# Subscription order form

To find out the subscription rates for International Journal of Mechatronics and Automation (IJMA), please go to www.inderscience.com/ijma or http://www.inderscience.com/subscribe.php (for all Inderscience titles, including IJMA)

This form may be photocopied or downloaded from www.inderscience.com/www/ielsubsform2.pdf

Journals may be ordered online from <a href="http://inderscience.metapress.com">http://inderscience.metapress.com</a>

Please address subscription orders to: Inderscience Enterprises Ltd. (Order Dept.) World Trade Centre Building II 29 Route de Pre-Bois, Case Postale 856, CH-1215 Genève 15, SWITZERLAND

For rush orders please: fax: +44 1234 240515 or E-mail: subs@inderscience.com

Please enter the following regular subscriptions to IJMA

...... subscriptions (Print or Online) [delete as necessary]

...... subscriptions (Print and Online)

Total cost .....

Methods of payment overleaf

# Relevant Inderscience Titles

International Journal of Advanced Mechatronic Systems

International Journal of Applied Systemic Studies

International Journal of Automation and Control

International Journal of Bio-Inspired Computation

International Journal of Biomechatronics and Biomedical Robotics

International Journal of Computational Vision and Robotics

International Journal of Computer Applications in Technology

International Journal of Industrial Electronics and Drives

International Journal of Instrumentation Technology

International Journal of Intelligent Systems Technologies and Applications

International Journal of Mechatronics and Manufacturing Systems

International Journal of Modelling Identification and Control

International Journal of Sensor Networks

International Journal of System Control and Information Processing

International Journal of Systems, Control and Communications

These titles are part of a unique profile on: ELECTRONIC SYSTEMS, CONTROL AND ARTIFICIAL INTELLIGENCE

For information about these titles and the substantial portfolio of journals developed by Inderscience, please visit the website at: www.inderscience.com

# Notes for Authors and Submission of Papers

Submitted papers should not have been previously published or be currently under consideration for publication elsewhere.

All papers are refereed through a double-blind process. A guide for authors and other relevant information for submitting papers are available on the Submission of Papers section of the Inderscience website: please go to

#### **Author Guidelines**

(www.inderscience.com/guidelines)

To submit a paper, please go to

#### Submission of Papers

(http://www.inderscience.com/papers)

For queries concerning the journal, please contact:

#### Editor-in-Chief

Prof. Shuxiang Guo
Kagawa University
Department of Intelligent Mechanical Systems Engineering,
2217-20 Shinmachi, Hayashi-cho,
Takamatsu, 761-0396,
Japan
E-mail: quo@eng.kagawa-u.ac.jp

With a copy to: Editorial Office,

E-mail: subs@inderscience.com

(Please include in your email the title of the Journal)











Login i

PUBLISHERS OF DISTINGUISHED ACADEMIC, SCIENTIFIC AND PROFESSIONAL JOURNALS

Home

For readers

Subscription information Order articles Sample journals Latest issues Books Published proceedings

For authors

Submission of papers Notes for authors Calls for papers

Services

Search
Newsletter
Blog
TOC alerts
RSS feeds
Twitter
Facebook
OAI repository
Library form
Register with
Inderscience
Feedback

Noticeboard

New journals Conference announcements

# International Journal of Mechatronics and Automation (IJMA)

Volume 1 - Issue 1 - 2011

#### **Table of Contents**

Pages Title and authors

- 1 8 Robust internal model control for depth of anaesthesia Shahab Abdulla, Peng Wen DOI: 10.1504/IJMA.2011.039150
- 9 18 Hypergraph-oriented 3D reconstruction, interpretation and analysis of air flows
  Denis Klimentjew, Nils Erik Flick,
  Till Bosselmann, Jianwei Zhang
  DOI: 10.1504/IJMA.2011.039151
- 19 28 Development of an upper extremity motor function rehabilitation system and an assessment system

  Zhibin Song, Shuxiang Guo, Yili Fu
  DOI: 10.1504/IJMA.2011.039152
- 29 37 Suspension and wheel
  evaluation and experimentation
  testbed for planetary rovers
  Daniel Flippo, David Miller
  DOI: 10.1504/IJMA.2011.039153
- 38 45 Perspective of active capsule endoscope: actuation and localisation

  Xiaona Wang, Max Q-H. Meng

  DOI: 10.1504/IJMA.2011.039154
- 46 59 Design guidelines for power assist robots for lifting heavy objects considering weight perception, grasp differences and worst-cases

  S.M. Mizanoor Rahman, Ryojun Ikeura, Soichiro Hayakawa, Hideki Sawai

  DOI: 10.1504/IJMA.2011.039155
- 60 69 A novel hybrid wireless microrobot



- » Objectives
- » Readership
- » Contents
- » Subject Coverage
- » Editorial Board
- » Specific Notes for Authors
- » Sample issue
- » Latest TOC

## Browse Recent Issues:

» 2011 Vol.1 No. 1

Qinxue Pan, Shuxiang Guo, Takuya Okada DOI: 10.1504/IJMA.2011.039156

Pages Title and authors

Copyright © 2004-2011 Inderscience Enterprises Limited. All rights reserved.