In the Name of God

IRANIAN JOURNAL OF FUZZY SYSTEMS

HONORARY CHAIRMAN
L. A. Zadeh, *University of California, Berkeley, USA*

EDITOR-IN-CHIEF
M. Mashinchi, *Shahid Bahonar University of Kerman, Kerman, Iran*

MANAGING EDITOR
R. A. Borzooei, *Shahid Beheshti University, Tehran, Iran*

EDITORIAL BOARD

N. R. Arghami, *Mashhad, Iran*
A. Daneshgar, *Tehran, Iran*
E. Eslami, *Kerman, Iran*
S. Katebi, *Shiraz, Iran*
R. Langari, *Doha, Qatar*
A. Memariani, *Tehran, Iran*
J. Mordeson, *Omaha, USA*
W. Pedrycz, *Edmonton, Canada*
M. K. Sen, *Calcutta, India*
A. Vahidian Kamyad, *Mashhad, Iran*
J. L. Verdegay, *Granada, Spain*
R. Viertl, *Wien, Austria*
M. M. Zahedi, *Tehran, Iran*

ADVISORY BOARD

R. Aliev *(Baku, Azerbaijan)*
M. Anvari *(Berkeley, USA)*
J. Buckley *(Birmingham, USA)*
P. Corsini *(Udine, Italy)*
B. De Baets *(Gent, Belgium)*
P. Diamond *(Brisbane, Australia)*
D. Dubois *(Toulouse, France)*
S. C. Fang *(Raleigh, USA)*
M. Jamshidi *(Albuquerque, USA)*
Y. B. Jun *(Chinju, South Korea)*
L. Koczy *(Budapest, Hungary)*
Y. M. Liu *(Chengdu, China)*
M. Mukaidono *(Kawasaki, Japan)*
N. R. Pal *(Calcutta, India)*
I. Perfilieva *(Ostrava, Czech)*
H. Prade *(Toulouse, France)*
A. Ralescu *(Cincinnati, USA)*
D. Ralescu *(Cincinnati, USA)*
N. Sadati *(Tehran, Iran)*
F. G. Shi *(Beijing, China)*
A. Sostak *(Riga, Latvia)*
M. Sugeno *(Kyoto, Japan)*
I. B. Turksen *(Toronto, Canada)*

SUBSCRIPTION RATE

Iranian Journal of Fuzzy Systems (IJFS) is published four-monthly by the University of Sistan and Baluchestan. Annual subscription rates (including packing and postage) are as follows: for university departments, libraries, industrial and other multiple-reader institutions in Iran 80,000 Rials, in other countries 30 EURO; for individuals in Iran 40,000 Rials, in other countries 20 EURO. Reprints of papers are available for 1500 Rials per copy in Iran and 2 EURO per copy elsewhere (Including packing and postage). For more information, please visit the website of the journal.

مجله(Iranian Journal of Fuzzy Systems (IJFS طی نامه شماره ۳/۲۹۱۰/۶۲ مورخ ۸۳/۱/۲۶ کمیسیون نشریات علمی کشور درجه **علمی ـ پژوهشی** دریافت نمود و از آگوست ۲۰۰۷ در پایگاه استنادی بین المللی **ISI** نمایه شده است.

Journal Address
Iranian Journal of Fuzzy Systems
University of Sistan and Baluchestan, P.O. Box 98135-987
Zahedan, Iran.
Tel & Fax: +98-541-2431060
E-mail: ijfs@usb.ac.ir
Homepage: http://journals.usb.ac.ir/fuzzy

IRANIAN JOURNAL OF FUZZY SYSTEMS

Volume 8 Number 2 June 2011

IJFS

University of Sistan and Baluchestan, Zahedan, Iran.

S. A. Solovyov
Powerset Operator Foundations for Catalg Fuzzy Set Theories 1

E. Baloui Jamkhaneh, B. Sadeghpour Gildeh and G. Yari
Acceptance Single Sampling Plan with Fuzzy Parameter 47

X. Li, Z. Qin and D. Ralescu
Credibilistic Parameter Estimation and Its Application In Fuzzy Portfolio Selection 57

G. Jager
Lattice-valued Categories of Lattice-valued Convergence Spaces 67

E. Savas
$(A)_{\Delta}$ -double Sequence Spaces of Fuzzy Numbers Via Orlicz Function 91

Y. B. Jun, M. S. Kang and H. S. Kim
Bipolar Fuzzy Hyper BCK-ideals in Hyper BCK -algebras 105

W. Yao
Net-theoretical *L*-generalized Convergence Spaces 121

A. R. Meenakshi and P. Jenita
Generalized Regular Fuzzy Matrices 133

R. Thakur, K. K. Mondal and S. K. Samanta
Gradation of Continuity in Fuzzy Topological Spaces 143

EXCHANGE AGREEMENTS

AKCE International Journal of Graphs and Combinatorics
Kalasalingam University, Tamil Nadu, India

Archivum Mathematicum
Masaryk University, Brno, Czech Republic

Balkan Journal of Geometry and its Applications
Balkan Society of Geometers, Bucharest, Romania

Bulletin of the Iranain Mathematical Society
University of Tehran, Tehran, Iran

Bulletin of the Korean Mathematical Society
The Korean Mathematical Society, Seoul, Korea

Bulletin of the Malaysian Mathematical Sciences Society
Universiti Sains Malaysia,Penang, Malaysia

Bulletin of the Polish Academy of Sciences/Mathematics
Polish Academy of Sciences, Warszawa, Poland

Czechoslovak Mathematical Journal
Academy of Sciences of the Czech Republic, Praha, Czech Republic

Demonstratio Mathematica
Warsawa University of Technology, Warsawa, Poland

Glasnik Matematicki
University of Zagreb, Zagreb, Croatia

Houston Journal of Mathematics
University of Houston, Houston, Texas, USA

Hacettepe Journal of Mathematics and Statistics
Hacettepe University, Ankara, Turkey

International Journal of Applied Mathematics and Computer Science
University of Zielona Góra, Zielona Góra, Poland

Iranian Polymer Journal
Iran Polymer and Petrochemical Institute, Tehran, Iran

Italian Journal of Pure and Applied Mathematica
Via delle Scienze,Udine, Italy

Journal of Applied Mathematics and Computing
Sunmoon University, Asan, South Korea

Journal of Mathematics of Kyoto University
Kyoto University, Kyoto, Japan

Journal of the Egyptian Mathematical Society
Egyptian Mathematical Society, Cairo, Egypt

Journal of the Korean Mathematical Society
The Korean Mathematical Society, Seoul, Korea

Journal of Pure Mathematics
University of Calcutta, Kolkata, India

Mathematica Bohemica
Academy of Sciences of the Czech Republic, Praha, Czech Republic

Mechanical & Aerospace Engineering Journal
Imam Hossein University, Tehran, Iran

Nihonkal Mathematical Journal
Niigata University, Niigata, Japan

Note di Matematica
Universita' Via per Arnesano, Lecce, Italy

Novi Sad Journal of Mathematics
Institute of Mathematics, Novi Sad, Yugoslavia

Quasigroups and Related Systems
Institute of Mathematics, Technical University, Wroclaw, Poland

Revista Colombiana de Matematicas
Universidad Nacional de Colombia, Bogota, Colombia

Saitama Mathematical Journal
Saitama University, Saitama, Japan

Soochow Journal of Mathematics
Soochow University, Taipei, Taiwan

Southeast Asian Bulletin of Mathematics
University of Hong Kong, Hong Kong, China

Tatra Mountains Mathematical Publications
Slovak Academy of Sciences, Bratislava, Slovakia

Turkish Journal of Fuzzy Systems
University of Gaziantep, Gaziantep, Turkey

Yokohama Mathematical Journal
Yokohama City University &Yokohama National University, Yokohama, Japan

IRANIAN JOURNAL OF FUZZY SYSTEMS

Aims and Scope

The four-monthly Iranian Journal of Fuzzy Systems (IJFS) aims to provide an international forum for refereed original research works in the theory and applications of fuzzy sets and systems in the areas of foundations, pure mathematics, artificial intelligence, control, robotics, data analysis, data mining, decision making, finance and management, information systems, operations research, pattern recognition and image processing, soft computing and uncertainty modeling.

Manuscripts submitted to the IJFS must be original unpublished work and should not be in consideration for publication elsewhere.

Instructions to Authors

The language of the journal is English. Manuscripts should be typed according to the style given in the journal homepage: http://journals.usb.ac.ir/fuzzy

Submission of Manuscripts

Manuscripts submitted for publication should be sent electronically to ijfs-submit@usb.ac.ir or ijfs@usb.ac.ir in .pdf or .tex format.

Proofs and Reprints

Page proofs will be sent to the corresponding author to be checked for type setting and editing. There are no page charges and authors will receive 15 complimentary copies.

Proposing Special Issue

If you are interested in proposing a special issue, please contact the editor-in-chief at:
ijfs-editor@mail.uk.ac.ir or ijfs-editor@usb.ac.ir

The journal is indexed and abstracted in:

Science Citation Index Expanded (also known as SciSearch®)
Journal Citation Reports/Science Edition
Thomson ISI
ISC (Islamic World Science Citation Center)
Mathematical Reviews
Zentralblatt MATH

Journal Address

Iranian Journal of Fuzzy Systems
University of Sistan and Baluchestan, P.O. Box 98135-987
Zahedan, Iran.
Tel & Fax: +98-541-2431060
E-mail: ijfs@usb.ac.ir
Homepage: http://journals.usb.ac.ir/fuzzy

ISSN: 1735-0654

Published by the University of Sistan and Baluchestan and approved by the Ministry of Science, Research and Technology of Iran and the Iranian Fuzzy Systems Society.