

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

ADVISORY BOARD

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

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 150,000 Rials, in other countries 30 EURO; for individuals in Iran 40,000 Rials, in other countries 20 EURO. Reprints of papers are available for 5000 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 - 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://ijfs.usb.ac.ir>

IRANIAN JOURNAL OF FUZZY SYSTEMS

Volume 9 Number 6 December 2012

Special Issue: Fuzzy Mathematics

IJFS

University of Sistan and Baluchestan, Zahedan, Iran.

A. Ghodratnama, S. A. Torabi and R. Tavakkoli-Moghaddam Credibility-Based Fuzzy Programming Models to Solve the Budget- Constrained Flexible Flow Line Problem	1
E. Eslami An Algebraic Structure for Intuitionistic Fuzzy Logic	31
C. Angheluta and I. Cristea Fuzzy Grade of the Complete Hypergroups	43
T. Allahviranloo and R. Saneifard Defuzzification Method for Ranking Fuzzy Numbers Based on Center of Gravity	57
M. A. Nikouei Mahani, M. Koohi Moghadam and H. Nezamabadi-Pour A Fuzzy Difference Based Edge Detector	69
M. Alavi and B. Asady Symmetric Triangular and Interval Approximations of Fuzzy Solution to Linear Fredholm Fuzzy Integral Equations of the Second Kind	87
E. S. Kim, S. H. Ahn and D. H. Park The Relationship Between L -Fuzzy Proximities and L -Fuzzy Quasi-Uniformities	101
A. K. Mirmostafae and M. Mirzavaziri Uniquely Remotal Sets in c_0 -Sums and \mathbb{I}^{∞} -Sums of Fuzzy Normed Spaces	113
H. Y. Li (IC)LM-Fuzzy Topological Spaces	123

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, Warszawa, 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 Forum

Department of Mathematics Dibrugarh University, Assam, India

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
EBSCO
SCOPUS

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://ijfs.usb.ac.ir>

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.*