

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>	J. Mordeson , <i>Omaha, USA</i>
R. A. Borzooei , <i>Tehran, 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>	F. G. Shi , <i>Beijing, China</i>
S. Katebi , <i>Shiraz, Iran</i>	A. Vahidian Kamyad , <i>Mashhad, Iran</i>
R. Langari , <i>Doha, Qatar</i>	J. L. Verdegay , <i>Granada, Spain</i>
M. Mashinchi , <i>Kerman, Iran</i>	R. Viertl , <i>Wien, Austria</i>
A. Memariani , <i>Tehran, Iran</i>	M. M. Zahedi , <i>Kerman, Iran</i>
R. Mestiar , <i>Bratislava, Slovakia</i>	

ADVISORY BOARD

S. Abbasbandy (<i>Ghazvin, Iran</i>)	G. Jaeger (<i>Stralsund, Germany</i>)	A. Ralescu (<i>Cincinnati, USA</i>)
R. Aliev (<i>Baku, Azerbaijan</i>)	M. Jamshidi (<i>Albuquerque, USA</i>)	D. Ralescu (<i>Cincinnati, USA</i>)
M. Anvari (<i>Berkeley, USA</i>)	Y. B. Jun (<i>Chinju, South Korea</i>)	R. Saadati (<i>Tehran, Iran</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>)	S. M. Taheri , (<i>Tehran, Iran</i>)
S. C. Fang (<i>Raleigh, USA</i>)	H. Prade (<i>Toulouse, France</i>)	I. B. Turksen (<i>Toronto, Canada</i>)

SUBSCRIPTION RATE

Iranian Journal of Fuzzy Systems (IJFS) is published two-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 900,000 Rials, in other countries 40 EURO; for individuals in Iran 700,000 Rials, in other countries 30 EURO. Reprints of papers are available for 150,000 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: +98-54-33431060
E-mail: ijfs@usb.ac.ir
Homepage: <http://ijfs.usb.ac.ir>

IRANIAN JOURNAL OF FUZZY SYSTEMS

Volume 14 Number 2 April 2017

IJFS

University of Sistan and Baluchestan, Zahedan, Iran.

<i>H. Ahmadzade, Y. Sheng and F. Hassantabar Darzi</i> Some Results of Moments of Uncertain Random Variables	1
<i>M. S. Kordafshari, A. Movaghar and M. R. Meybodi</i> A Joint Duty Cycle Scheduling and Energy Aware Routing Approach Based on Evolutionary Game for Wireless Sensor Networks	23
<i>A. Mehrabian, R. Tavakkoli-Moghaddam and K. Khalili-Damaghani</i> Multi-Objective Routing and Scheduling in Flexible Manufacturing Systems Under Uncertainty	45
<i>N. L. Braha and M. Et</i> Tauberian Theorems for the Euler-Nörlund Mean-Convergent Sequences of Fuzzy Numbers	79
<i>J. Fang, Y. Li and W. Chen</i> On the System of Level-Elements Induced by an L -Subset	93
<i>H. V. Long, N. T. K. Son and N. V. Hoa</i> Fuzzy Fractional Partial Differential Equations in Partially Ordered Metric Spaces	107
<i>A. Shakiba, M. R. Hooshmandasl, B. Davvaz and S. A. Shahzadeh Fazeli</i> S-Approximation Spaces: A Fuzzy Approach	127
<i>J. Wu and Y. Yue</i> Formal Balls in Fuzzy Partial Metric Spaces	155
<i>Persian Translation of Abstracts</i>	167

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 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***Mathematical Forum***Dibrugarh University, Dibrugarh, 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 two-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 works and should not be in consideration for publication elsewhere.

Instructions to Authors

The language of the journal is English. All accepted papers should also be prepared in AMS-TeX or LaTeX style and should be typed according to the style given in the journal homepage: <http://ijfs.usb.ac.ir>

Submission of Manuscripts

Manuscripts submitted for publication should be sent electronically to this URL address: <http://ijfs.usb.ac.ir> in pdf 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 only complimentary electronic reprint file.

Proposing Special Issue

If you are interested in proposing a special issue, please contact the editor-in-chief at: 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: +98-54-33431060
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.*