

In the Name of God

IRANIAN JOURNAL OF FUZZY SYSTEMS

HONORARY EDITOR-IN-CHIEF

M. Mashinchi, *Shahid Bahonar University of Kerman, Kerman, Iran*

EDITOR-IN-CHIEF

M. M. Zahedi, *Graduate University of Advanced Technology, Kerman, Iran*

MANAGING EDITOR

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

EDITORIAL BOARD

S. Abbasbandy , <i>Ghazvin, Iran</i>	J. N. Mordeson , <i>Omaha, USA</i>
M. Baczynski , <i>Katowice, Poland</i>	W. Pedrycz , <i>Alberta, Canada</i>
R. A. Borzooei , <i>Tehran, Iran</i>	F. G. Shi , <i>Beijing, China</i>
A. Daneshgar , <i>Tehran, Iran</i>	S. M. Taheri , <i>Tehran, Iran</i>
A. Di Nola , <i>Salerno, Italy</i>	J. L. Verdegay , <i>Granada, Spain</i>
E. Eslami , <i>Kerman, Iran</i>	R. Viertl , <i>Wien, Austria</i>
G. Jaeger , <i>Stralsund, Germany</i>	Z. Xu , <i>Sichuan, China</i>
M. Mashinchi , <i>Kerman, Iran</i>	M. M. Zahedi , <i>Kerman, Iran</i>
R. Mesiar , <i>Bratislava, Slovakia</i>	

ADVISORY BOARD

R. A. Aliev , <i>(Baku, Azarbaijan)</i>	Y. B. Jun , <i>(Chinju, South Korea)</i>	H. Prade , <i>(Toulouse, France)</i>
T. Allahviranloo , <i>(Istanbul, Turkey)</i>	M. Kalina , <i>(Bratislava, Slovakia)</i>	A. Ralescu , <i>(Cincinnati, USA)</i>
M. Amini , <i>(Mashhad, Iran)</i>	S. Katebi , <i>(Shiraz, Iran)</i>	D. Ralescu , <i>(Cincinnati, USA)</i>
A. Borumand Saeid , <i>(Kerman, Iran)</i>	I. Kaya , <i>(Istanbul, Turkey)</i>	N. Sadati , <i>(Tehran, Iran)</i>
J. J. Buckley , <i>(Birmingham, USA)</i>	L. T. Koczy , <i>(Budapest, Hungary)</i>	R. Saadati , <i>(Tehran, Iran)</i>
P. Corsini , <i>(Udine, Italy)</i>	A. Memariani , <i>(Tehran, Iran)</i>	A. Sostak , <i>(Riga, Latvia)</i>
B. De Baets , <i>(Gent, Belgium)</i>	H. Mishmast Nehi , <i>(Zahedan, Iran)</i>	M. Sugeno , <i>(Kyoto, Japan)</i>
D. Dubois , <i>(Toulouse, France)</i>	M. Mukaidono , <i>(Kawasaki, Japan)</i>	M. Teshnehlab , <i>(Tehran, Iran)</i>
M. Eftekhari , <i>(Kerman, Iran)</i>	H. Nezamabadi-pour , <i>(Kerman, Iran)</i>	B. L. Turkmen , <i>(Toronto, Canada)</i>
S. C. Fang , <i>(Raleigh, North Carolina)</i>	N. R. Pal , <i>(Calcutta, India)</i>	A. Vahidian Kamyad , <i>(Mashhad, Iran)</i>
M. Jamshidi , <i>(Texas, USA)</i>	I. Perfiljeva , <i>(Ostrava, Czech)</i>	M. A. Yaghoobi , <i>(Kerman, Iran)</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.

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 18 Number 5 October 2021

IJFS

University of Sistan and Baluchestan, Zahedan, Iran.

<i>T. Lei, Y. Qin, Z. Xu and R. A. Borzooei</i> A bibliometric analysis of Iranian Journal of Fuzzy Systems (2007-2020)	1
<i>A. Piegat and M. Landowski</i> Multidimensional interval type 2 epistemic fuzzy arithmetic	19
<i>N. Q. Liu, Y. J. Chen and Y. K. Liu</i> Approximating credibilistic constraints by robust counterparts of uncertain linear inequality	37
<i>M. Kalina and O. Stašová</i> Idempotent uninorms and nullnorms on bounded posets	53
<i>A. Vafamand, A. Fatehi and S. M. Emad Oliaee</i> A fuzzy generalized predictive controller to optimal drug dosage therapy of mathematical modeling of HIV	69
<i>Ö. Ç. Sökmen and M. Yılmaz</i> Hierarchical Chinese postman problem with fuzzy travel times	87
<i>M. Akram and D. Shumaiza</i> Multi-criteria decision making based on q-rung orthopair fuzzy promethee approach	107
<i>X. F. Zhang and J. Ai</i> Robust stabilization of uncertain rectangular singular fractional order T-S fuzzy systems with the fractional order $0 < \alpha < 1$	129
<i>C. Y. Wang, L. Wan and B. Zhang</i> Topological structures induced by L-fuzzifying approximation operators	141
<i>M. R. Seikh, S. Karmakar and O. Castillo</i> A novel defuzzification approach of type-2 fuzzy variable to solving matrix games: An application to plastic ban problem	155
<i>T. N. Luan, D. H. Hoang and T. M. Thuyet</i> On homogeneity of the smallest semicopula-based universal integral in the class of pseudo-continuous semicopulas	173
<i>M. R. Setayandeh and A. R. Babaei</i> A novel method for multi-objective design optimization based on fuzzy systems	181
<i>Persian Translation of Abstracts</i>	199

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.