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

ADVISORY BOARD

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

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 1 February 2021

IJFS

University of Sistan and Baluchestan, Zahedan, Iran.

B. Farhadinia, U. Aickelin and H. A. Khorshidi Higher order hesitant fuzzy Choquet integral operator and its application to multiple criteria decision making	1
Y. Y. Zhao and F. Qin The cross-migrativity equation with respect to semi-t-operators	17
M. S. Aslam, X. Dai and T. Zhao Stability and stabilization of network T-S fuzzy systems with random packet-loss for Synchronous machine	35
M. Aghamohagheghi, S. M. Hashemi and R. Tavakkoli-Moghaddam An advanced decision support framework to assess sustainable transport projects using a new uncertainty modeling tool: Interval-valued Pythagorean trapezoidal fuzzy numbers	53
S. W. Han and R. R. Wang Fuzzy closure operators and their applications	75
B. Jiang, L. Peng, J. Li and W. Lio Uncertain network DEA models for evaluating efficiencies of Bi-echelon supply chain with asymmetric power	87
S. Nosratian, M. Moradkhani and M. B. Tavakoli Hybrid data compression using fuzzy logic and Huffman coding in secure IOT	101
A. Yousefi, M. S. Pishvaee and E. Teimoury Adjusting the credit sales using CVaR-based robust possibilistic programming approach	117
S. Aliannezhadi and A. Abbasi Molai A new algorithm for geometric optimization with a single-term exponent constrained by bipolar fuzzy relation equations	137
S. Aramesh, S. M. Mousavi and V. Mohagheghi A new comprehensive project scheduling, monitoring, and management framework based on the critical chain under interval type-2 fuzzy uncertainty	151
A. Akbarzadeh Kalat and V. Mokhtari Robust output feedback adaptive sliding mode control for a class of uncertain nonlinear systems using robust adaptive fuzzy observer	171
N. V. Hoa On the stability for implicit uncertain fractional integral equations with fuzzy concept	185
Persian Translation of Abstracts	203

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.