IJCIS: Call for Papers Special Issue
"Mathematics and Computational Intelligence Synergies for Emerging Challenges"

Guest Editors:

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Aims and Scope

Many areas of modern knowledge encounter problems, whose solution is impossible without applying advanced mathematical techniques as well as computational intelligence based methods. Moreover, the interaction and interplay between mathematical techniques and computational technologies is fundamental for the adequate approach of the research of such problems. Among the most important mathematical tools for this interaction are fuzzy logic based mathematical technologies as well as rough sets based methodologies. These technologies and specifically their interplay allow addressing different challenges of the present technological age.
This special issue will include the last advances in both fields, mathematics and computational intelligence, and the synergies among them, in order to solve diverse tempting theoretical and real-world important problems.

It will be composed of the reviewed extensions of the best papers submitted to the 11th European Symposium on Computational Intelligence and Mathematics (ESCIM 2019). Other great contributions will be welcome.

Relevance to this journal
The scope of ESCIM 2019 is related to the main topics of IJCIS, such as, autonomous reasoning, data science, data mining, data visualization, decision support systems, intelligent information retrieval, pattern recognition, prediction systems, process and system control, real-time systems, signal and image processing, system modelling and optimization, time series prediction, warning systems, web intelligence, deep learning, etc.

Therefore, this special issue will contain the best papers in fundamental topics of IJCIS.

Main topics and quality control

The papers will mainly on aggregation functions; aggregations for extensions of fuzzy sets; data mining and knowledge discovery; formal concept analysis; fuzzy control; fuzzy decision analysis, decision making, optimization and design; fuzzy databases and information retrieval; fuzzy measures and integrals; fuzzy sets and fuzzy logic; general operators in Computer Science; interval-valued fuzzy sets; knowledge extraction, representation, and modelling; Learning, adaptive,

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and evolvable fuzzy systems; logic programming; mathematical foundations of fuzzy sets and fuzzy systems; rough set theory; applications of Computational Intelligent Systems, etc.

Full papers will be subject to a strict review procedure for final selection to this special issue based on the following criteria:

1. Quality, originality and relevance in theory and methodology of Mathematics and Computational Intelligence;
2. Extended papers must contain at least 40% new material (qualitative) relative to the conference paper.

Important Dates

Submission of papers:	**20 November 2019**
Notification of review results:	15 January 2020
Submission of revised papers:	15 March 2020
Notification of final review results:	15 April 2020

Submit your paper

All papers have to be submitted via the Editorial Manager online submission and peer review system. Instructions will be provided on screen and you will be stepwise guided through the process of uploading all the relevant article details and files associated with your submission. All manuscripts must be in the English language.

To access the online submission site for the journal, please visit https://www.editorialmanager.com/ij-cis/default.aspx. Note that if this is the first time that you submit to the International Journal of Computational Intelligence Systems, you need to register as a user of the system first.

NOTE : Before submitting your paper, please make sure to review the journal's Author Guidelines first.

Introduction of the Guest Editor(s)

Jesús Medina is currently Full Professor at the Department of Mathematics, University of Cádiz, Cádiz, Spain. He received the M.S. degree in mathematics in 1998 from the University of Granada, Spain, and the Ph.D. degree in mathematics in 2002 from the University of Málaga, Spain. He is also the author or coauthor of more than 150 papers presented at conferences and published in scientific journals, including the Journal of Applied Logic, Applied Mathematics Letters, Information Sciences, Fuzzy Sets and Systems, and Computers and Mathematics with Applications. He is Associate/Area Editor of diverse ISI journals and it is interested in the research areas of fuzzy sets, fuzzy rough sets, fuzzy logic, residuated and multiadjoint logic programming, relational data

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analysis, and algebraic structures for soft computing. He is a Member of the European Association for Fuzzy Logic and Technology (EUSFLAT) and of the Spanish Association for Artificial Intelligence (AEPIA).

Juan Moreno-Garcia received the B.E. and Ph.D. degrees from the University of Castilla-La Mancha, Spain, in 1992 and 2002, respectively, and the M.S. degree from the University of Murcia, Spain, in 1996. He is an Associate Professor of industrial engineering at the University of Castilla-La Mancha. He is a member of the ORETO research group.
Prof. Juan Moreno-Garcia has published more than 150 papers on International Journals and Books, and on the Proceedings of International Conferences. He has been principal researcher in a variety of national projects. He is a member of the Editorial Board of the International Journal of Computational Intelligence Systems. He is member of the Spanish Association for Fuzzy Logic and Technologies, and Spanish Association of Artificial Intelligence. His main fields of interest are fuzzy and linguistic modeling, time series and linguistic description. He tries to develop models for real applications.

László T. Kóczy received the Ph.D. degree from the Technical University of Budapest in 1977, and the D.Sc. (a postdoctoral degree) from the Hungarian Academy of Science in 1998. He spent his career at BME until 2001, and from 2002 at Szechenyi Istvan University (Gyor, SZE), where he was Dean of Engineering, and has been from 2013 to current President of the University Research and of the University Ph.D. Councils. He is a member of the National Doctoral Council, a member, by appointment of the Prime Minister, of the Hungarian Accreditation Committee (for Higher Education), where he chairs the Engineering Sciences Board, the Council for Professors and Doctoral Schools, and the Standing Committeee for Criteria of Professorors' Appointment. He has been a visiting professor in Australia (including UNSW), Japan, Korea Austria and Italy. He was an IEEE CIS AdCom member for two cycles and CIS representative on the Neural Networks Council AdCom for another two times. His main research activities have been in the field of Computational Intelligence, especially in fuzzy systems, evolutionary and memetic algorithms, and neural networks, as well as applications in engineering, logistics, management, etc. He has published 735 research articles with over 2800 fully independent and over 6200 Google Scholar citations. His h-index is 38. His main results are: the concept of rule interpolation in sparse fuzzy models, and hierarchical interpolative fuzzy systems, fuzzy Hough transform; fuzzy signatures fuzzy situational maps, and fuzzy signature state machines, and the node reduction algorithm in Fuzzy Cognitive Maps, the Bacterial Memetic Evolutionary Algorithm and the Discrete Bacterial Memetic Evolutionary Algorithm (for NP-hard continuous and discrete optimization and search), among others. His research interests include applications of CI for telecommunication, transportation and logistics, vehicles and mobile robots, control, built environment evaluation, and maintenance problems, information retrieval, employee attitude evaluation, management system investigation, etc.

Eloísa Ramírez-Poussa is currently Associate Professor at the Department of Mathematics, University of Cádiz, Cádiz, Spain. She is the coauthor of 60 papers presented at conferences and

published in scientific journals, including the Journal of Computational and Applied Mathematics, Information Sciences, Fuzzy Sets and Systems, and International Journal of Approximate Reasoning. She is interested in the research areas of fuzzy sets, fuzzy logic, formal concept analysis, rough set theory and algebraic structures for soft computing. She is the ECI Vice Leader of a working group of the COST Action: DIGital FORensics: evidence Analysis via intelligent Systems and Practices (DigForASP) – CA17124, and also collaborates in other nationals projects and research contracts with companies. He is a Member of the European Association for Fuzzy Logic and Technology (EUSFLAT) and of the Spanish Association for Artificial Intelligence (AEPIA).