

# International Journal of Computational Intelligent Systems: Special Issue proposal form

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## Special issue proposal form:

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### Title:

Stream Processing: Real-Time Big Data Analytics with Applications

### Guest Editors:

Prof. Cristina Rubio-Escudero<sup>1</sup>.

Prof. Francisco Martínez-Álvarez<sup>2</sup>.

Prof. Alicia Troncoso<sup>2</sup>.

Prof. José C. Riquelme<sup>1\*</sup>.

<sup>1</sup>Department of Computer Science, University of Seville, Spain.

<sup>2</sup>Data Science & Big Data Lab, Pablo de Olavide University, Spain.

\*Corresponding editor: riquelme@us.es

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### Aims and Scope

Huge amount of data has been generated from almost all disciplines in recent years. However, the knowledge extraction from such massive data cannot always be performed by using standard statistical techniques. Very powerful approaches have been particularly developed within the context of big data analytics to deal with data streams. With its rapid development, automated machine learning methods for extracting relevant patterns, high performance computing or data visualization are being widely, and successfully, applied to a wide variety of problems.

Stream processing is an emerging big data technology. However, many other terms can be found in the literature referring to it, such as real time analytics, streaming analytics, real time streaming analytics or even event processing. Data coming from sensors are quite often the sources of information that feed streaming processes. In this sense, the Internet of Things (IoT) devices are generating big data streams that need to be processed in (near) real time. Since such devices are cheap and their batteries have low power consumption, they are being massively deployed for multiple and diverse purposes.

In this context, this special issue focuses on the application of machine learning, deep learning and computational intelligence techniques to data streams, in order to extract knowledge in real-time from big data multiple sources. Authors are encouraged to share their successful case studies with particular emphasis in those using real-world data. The submission of surveys or works without a clear contribution for solving these kinds of problems is discouraged.

### Relevance to this journal

The International Journal of Computational Intelligence Systems publishes state-of-the-art research and development in all aspects of applied computational intelligence, especially

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targeting articles showing the use of techniques and methods originating from computational intelligence research and theory.

The journal publishes only articles related to the use of computational intelligence, including Data Mining, IoT and Smart Environments or Deep Learning, among others, which are the core topics of this special issue.

Similar special issues in this journal and other journals:

[https://static.springer.com/sgw/documents/1606778/application/pdf/SI\\_Big+Data+IoT+Streams+and+Heterogeneous+Source+Mining.pdf](https://static.springer.com/sgw/documents/1606778/application/pdf/SI_Big+Data+IoT+Streams+and+Heterogeneous+Source+Mining.pdf) (Deadline was on May 26<sup>th</sup> 2017)

<https://www.journals.elsevier.com/internet-of-things/call-for-papers/special-issue-on-iot-analytics-for-data-streams> (Deadline was on October 31<sup>st</sup> 2018)

[https://www.mdpi.com/journal/data/special\\_issues/DSMP](https://www.mdpi.com/journal/data/special_issues/DSMP) (Deadline was on November 10<sup>th</sup> 2018)

<https://www.hindawi.com/journals/wcmc/si/968143/cfp/> (Deadline was on December 7<sup>th</sup> 2018)

After a thorough search, to our knowledge, there is no special issue open addressing these topics.

## **Main topics and quality control**

For all the aforementioned, we kindly invite the Scientific Community to contribute to this special issue, by submitting novel and original research addressing one or more of the following topics, all in the context of big data streaming analytics:

1. IoT Analytics and Systems
2. Computational Intelligence Models
3. Deep Learning Models
4. Hybrid Intelligent Models
5. Information Fusion

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

1. Quality and originality;
2. Relevance to the research area;
3. Social and economic impact of the approach proposed;
4. If there is an implementation, its details must be provided.

## **Important Dates**

Submission of papers: July 15<sup>th</sup>, 2019

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Notification of review results: October 1<sup>st</sup>, 2019  
Submission of revised papers: October 31<sup>st</sup>, 2019  
Notification of final review results: December 15<sup>th</sup>, 2019

## **Short CV of guest editor(s)**

**Cristina Rubio-Escudero** received the PhD degree in Computer Science from the University of Granada, Spain, in 2007. She has been with the Department of Computer Science at University of Seville since 2007, where she is currently an Associate Professor. Her primary areas of interest are bioinformatics, data mining and big data analytics. More information at: [https://investigacion.us.es/sisius/sis\\_showpub.php?idpers=14876](https://investigacion.us.es/sisius/sis_showpub.php?idpers=14876)

**Francisco Martínez-Álvarez** received the MSc degree in Telecommunications Engineering from the University of Seville, and the PhD degree in Computer Engineering from the Pablo de Olavide University. He has been with the Department of Computer Science at the Pablo de Olavide University since 2007, where he is currently an Associate Professor. His primary areas of interest are time series analysis, data mining, and big data analytics. More information at: <http://datalab.upo.es/martinez>

**Alicia Troncoso** received the PhD degree in Computer Science from the University of Seville, Spain, in 2005. She was an Assistant Professor in the Department of Computer Science at the University of Seville from 2002 to 2005. She has been with the Department of Computer Science at the Pablo de Olavide University since 2005, where she is currently a Full Professor. Her primary areas of interest are time series forecasting, machine learning and big data. More information at: <http://datalab.upo.es/troncoso>

**José C. Riquelme** received the MSc degree in Mathematics and the PhD degree in Computer Science from the University of Seville, Spain. Since 1987, he has been with the Department of Computer Science, University of Seville, where he is currently a Full Professor. His primary areas of interest are data mining, machine learning techniques, and big data. More information at: [https://investigacion.us.es/sisius/sis\\_showpub.php?idpers=3275](https://investigacion.us.es/sisius/sis_showpub.php?idpers=3275)