

# Concurrency and Computation: Practice and Experience

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## Call for Papers

### Special Issue on

## Novel Data Mining Paradigms based on Soft Computing and Machine Learning in the current and upcoming Information Society Revolution

### ■ Overview

The ever-increasing pervasiveness of Internet connections and the miniaturization of hardware, together with the success of new distributed computing and storage architectures, such as cloud, fog, mobile edge computing, have paved the way to a new generation of data-centric applications, potentially able to revolutionize information society. Data gathering and sharing are particularly pivotal to our society with the proliferation of the Internet of Things and social networks, and the consequent data processing and information inference equally important and poses several non-trivial challenges.

In fact, such a vast availability of data is calling for novel means to extract information and to make such data/information useful to multiple aims, spanning from improving cities' management, realizing smart cities, to increasing the industrial competitiveness, or fighting against terrorist organizations, just to cite some. On the one hand, the need to store and exchange large amount of data has led to a radical rethinking of the database systems, leading to the NoSQL solutions, or the evolution of communication protocols and computing infrastructures, making cloud computing, and its variants, so popular and widespread.

A similar research and technological advancement is mandatory also in the way data is processed, and information is inferred. Novel approaches and research fields are emerging, such as big data analytics, sentiment analysis, or deep learning, where soft computing and machine learning are extensively applied for data mining, in order to

manage to handle the scale of the data sets, the geographical distribution of the interacting systems, the expressiveness of the processing means, and so on. A non-marginal aspect is also on how to extract the hidden knowledge within these vast data sets and how to take advantage of the mentioned approaches to design advanced solutions where applications can learn from data to extract knowledge from past experiences, and to make decisions and predictions based on such obtained knowledge.

The aim of this special issue is to bring together experiences intersecting the two fields of soft computing and machine learning to the key issue of data mining in the current large-scale data sharing infrastructures to promote a convergence and cross-fertilization among them. We also solicit contributions coming from the industrial community to present concrete applications of these novel means in the big data analytics and knowledge extraction.

## ■ Topics of Interest

Preferred topics in this issue include (but are not limited to):

- Machine learning for data mining and knowledge extraction
- Soft computing for big data analytics
- Data mining and knowledge extraction enhanced with computational intelligence
- Data mining and Knowledge extraction in the Internet of Things
- Cloud-based services for large data sets processing
- Data processing in Cloud-Edge Systems
- Information forecasting with Machine learning and soft computing
- Knowledge classification with Deep Learning-based solutions
- Processing large data sets with heterogeneous features from multiple different sources
- Big Data Analytics using Soft Computing and Machine Learning
- Information fusion
- Soft computing and Machine Learning Data fusion in large-scale computing solutions
- Feature selection/classification from SNS

## ■ Proposed Guest Editors

- Prof. Chang Choi ([enduranceaura@gmail.com](mailto:enduranceaura@gmail.com))

Chosun University, Rep. of Korea

- Prof. Florin Pop ([florin.pop@cs.pub.ro](mailto:florin.pop@cs.pub.ro))

University Politehnica of Bucharest, Romania

- Prof. Jun Huang ([jhuang@cqupt.edu.cn](mailto:jhuang@cqupt.edu.cn))

Chongqing University of Posts and Telecommunications, China

## ■ Instructions for ACM RACS 2018

- Special issue " Novel Data Mining Paradigms based on Soft Computing and Machine Learning in the current and upcoming Information Society Revolution" to publish the high-quality papers presented at
  - ACM RACS 2018 conference that will be held in Honolulu, Hawaii, USA, from 9 to 12 October 2018 (Sponsored by ACM SIGAPP)
  - (<https://oslab.ssu.ac.kr/CFP/RACS2018/index.jsp?menu=home>).
- Manuscripts should not exceed 16 pages in length and must be prepared for publication according to the following journal's Author Guidelines (Wiley template)
- Authors may submit extended versions of a conference paper but it must have at least 50% different material beyond the conference original paper or any other previously published work.

## ■ Important Dates

- Submission Due : 31 December, 2018
- 1<sup>st</sup> Round Notification : 31 March, 2019
- Revision : 30 April, 2019
- Final version Submission : 30 June, 2019