



Call for Papers

Journal of Universal Computer Science (J.UCS) Special Issue

Pattern Recognition and Artificial Intelligence - Current Challenges, Novel Solutions and Emerging Applications

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Background & Call for Manuscripts

Pattern Recognition and artificial intelligence (AI) techniques have been successfully used in a variety of domains. Nonetheless, current challenges still motivate further improvement and scientific efforts. In particular, the majority of practical applications of pattern recognition are still struggling with huge amounts of data that exhibit such challenges as concept drift, non-stationary underlying processes, noise, and common lack of labels or additional metadata that could be useful for further analysis. In addition to that, scalability of those practical applications and the ability to adapt to constantly changing environments still pose problems. Moreover, problems with

heterogeneous and multi-source data that require dedicated approaches also emerge. As for AI algorithms, apart from their efficiency, they still require work on fairness, explainability and assurance of fundamental rights and ethical foundations.

Therefore, the special issue intends to cover recent solutions to the abovementioned problems, novel methods and algorithms, advances, challenges, as well as practical applications of AI and pattern recognition.

Topics of interest include, but are not limited to:

- Emerging pattern recognition methods applied to image processing, networks, language processing and other novel applications
- Parallelization for pattern recognition and AI
- Biometric human identification
- Machine learning for image processing and telecommunications
- Deep learning and data mining applied to pattern recognition
- New advancements (architectures, solutions, applied algorithms and methods) for 5G networks, IoT, Next Generation Infrastructures and SmartGrids
- Bio-inspired solutions for detection, recognition and security applications
- Solutions to current emerging problems in image processing and telecommunications
- Fairness, explainability of AI
- Secure and adversarial ML
- Practical applications, especially large-scale

Important Deadlines

Submission by:	4th November 2019
Notification of authors by:	13th January 2020
Revised submission by:	1st March 2020
Notification about final decision by:	15th April 2020

Submission and Evaluation Procedure

The Journal of Universal Computer Science is a high-quality electronic publication that deals with all aspects of computer science. J.UCS has been appearing monthly since 1995 and is thus one of the oldest electronic journals with uninterrupted publication since its foundation. A number of special issues as well as the printed archive editions of the volumes are also available in print and can be ordered directly from J.UCS office.

For further information, please refer to

http://www.jucs.org/jucs_info/aims/unique_features.html

Manuscripts must be submitted in PDF format, written in English and should not exceed 20 pages. Papers only prepared according to the JUCS's guidelines for authors and submitted online (see procedure described below) will be included in the review process. Illustrations and tables must be provided as integrated parts of the manuscript. The guidelines for authors are available at

http://www.jucs.org/ujs/jucs/info/submissions/style_guide.html.

Please, bear in mind, that the extended version of papers originally presented at a conference or workshop must contain about 50% new material and the title of the extended version must clearly and unmistakably differ from the title of the article presented at the conference. Only novel research papers which are currently not under review at another event or a journal are accepted for the review process. For more details, please also refer to

http://www.jucs.org/ujs/jucs/info/special_issues/special_guidelines.html.

Please submit your original and proof-read papers not later than 4 November 2019 to

<http://www.easychair.org/conferences/?conf=raemapar2019>.

Each paper will be blind reviewed by at least 3 reviewers. According to the covered main subjects in the content, a selected set of reviewers with the appropriate expertise will be assigned.