



**13th International Conference on Computational
Collective Intelligence ICCI 2021**
Hybrid Mode
29 September – 1 October 2021, Rhodes, Greece



MLRWD 2021

Special Session on Machine Learning in Real-World Data

at the 13th International Conference on Computational Collective Intelligence (ICCCI 2021)
Rhodes, Greece, 29 September – 1 October 2021
Conference website: <http://www.iccci.pwr.edu.pl/>

Special Session Organizers

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Objectives and topics

Machine learning nowadays is considered a group of various methods used to solve the most complex real-world problems. Its usability is crucial in fields like medicine, finance, text mining, image analysis and more. Among the most prominent examples of machine learning- related methods we can find ensemble methods, multicriteria evolutionary algorithms, deep learning in neural networks and many more. We are particularly interested in subjects including various hybrid methods, extensions of existing methods, novel knowledge representations, which could be effectively used in real-world applications.

The second aspect of this session is devoted to still growing number of data available for users. Concepts like big data and data streams still gaining more and more attention. Classical methods seem to give debatable efficiency among this type of data, thus we believe, that there is a necessity for continuous improvements in the widely understand machine learning and hybrid systems. This session is dedicated to all these methods and their extensions for real-world data and applications.

The MLRWD 2021 Special Session at the 13th International Conference on Computational Collective Intelligence Technologies and Applications (ICCCI 2021) is devoted to among several machine learning tasks - such as classification, clustering, prediction, discovering the relationships between parameter values and the interactions between parts of the analyzed approaches in the context of optimization. We would like to offer an opportunity for researchers to focus especially on new methods related mostly to applications of machine learning in real-world applications. The scope of the session includes, but is not limited to the following subjects:

- Theoretical framework for ensemble methods
- Ensemble learning algorithms: bagging, boosting, stacking, etc.
- Ensemble methods in clustering
- Dealing with Big Data and small data sets
- Subsampling and feature selection in multiple model machine learning
- Diversity, accuracy, Swarm and Evolutionary algorithms and their applications;

- Multicriteria optimization for large scale problems;
- Decision Support systems;
- Data classification and data clustering;
- Decision trees and ensemble methods;
- Stream data analysis;
- Big Data representation;
- Association rule mining;
- Pattern recognition;
- Artificial neural networks and deep learning;
- Contributions from similar subjects e.g. Computational Learning Models, Evolutionary Techniques, Multi-Agent Systems.

Important dates

Submission of papers: **15 May 2021 (Hard deadline)**
 Notification of acceptance: **15 June 2021**
 Camera-ready papers: **30 June 2021**
 Registration & payment: **30 June 2021**
 Conference date: **29 September – 1 October 2021**

Program Committee (to be invited)

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Submission

All contributions should be original and not published elsewhere or intended to be published during the review period. Authors are invited to submit their papers electronically in pdf format, through EasyChair. All the special sessions are centralized as tracks in the same conference management system as the regular papers. Therefore, to submit a paper please activate the following link and select the track: **MLRWD 2021: Special Session on Machine Learning in Real-World Data.**

<https://easychair.org/conferences/?conf=iccci20210>

Authors are invited to submit original previously unpublished research papers written in English, of up to 13 pages, strictly following the LNCS/LNAI format guidelines. Authors can download the Latex (recommended) or Word templates available at [Springer's web site](#). Submissions not following the format guidelines will be rejected without review. To ensure high quality, all papers will be thoroughly reviewed by the MLRWD 2021 Program Committee. All accepted papers must be presented by one of the authors who must register for the conference and pay the fee. The conference proceedings will be published by Springer in the prestigious series LNCS/LNAI (indexed by ISI CPCI-S, included in ISI Web of Science, EI, ACM Digital Library, dblp, Google Scholar, Scopus, etc.).