

## IPROSE 2022

### Special Session on Intelligent Problem Solving for Smart Real World Systems

at the 14<sup>th</sup> Asian Conference on Intelligent Information and Database Systems (ACIIDS 2022)

Almaty, Kazakhstan, June 6-9, 2022

Conference website: <http://www.aciids.pwr.edu.pl/>

#### Special Session Organizers

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#### Objectives and topics

Artificial Intelligence covers a broad area of computational methods and algorithms for solving complex real-world problems. Artificial Intelligence (and Machine Learning in particular) has applications in many real-world fields including: medicine, business and finance, engineering, biology & ecology, and social sciences by employing specialized methods like: classification & clustering, reasoning & knowledge representation, neural networks, optimization, heuristics, image processing and intelligent data analysis. However, complexity and diversity of real world problems is constantly increasing, requiring new insights and novel approaches for dealing with the adaptation of AI methods and algorithms to the new challenges posed by current real-world problems. Approaching real problems and formulating them as tasks for intelligent problem solving is a complex art.

We are particularly interested in subjects requiring combination of different approaches into hybrid methods, extensions of existing methods, as well as novel knowledge representations and heuristics, which could effectively deal with the challenges and complexity of real-world applications. The IPROSE 2022 Special Session at the 14th Asian Conference on Intelligent Information and Database Systems (ACIIDS 2022) is seeking applications, extensions and combinations of various Artificial Intelligence tasks, including but not limiting to classification, prediction, feature engineering, feature selections, searching & optimization, heuristics, and uncertainty modeling.

We would like to offer an opportunity for researchers to focus especially on new methods related mostly to the applications of Artificial Intelligence for intelligent problem solving in real-world scenarios.

The scope of the IPROSE 2022 includes, but is not limited to the following topics:

- Development and use of real world datasets
- Data classification and data clustering
- Highly constrained problems
- Hybrid methods in prediction and classification
- Robust and probabilistic real-world optimization
- Artificial neural networks and deep learning
- Swarm and evolutionary algorithms and their applications
- Decision support systems
- Decision trees and ensemble methods
- Ensemble learning algorithms: bagging, boosting, stacking, etc.
- Multi-agent modeling and simulation
- Multi-agent problem solving

## Important dates

Submission of papers: **January 15, 2022 (EXTENDED - HARD)**

Notification of acceptance: **March 1, 2022**

Camera-ready papers: **March 15, 2022**

Registration & payment: **March 15, 2022**

Conference dates: **June 6-9, 2022**

## Program Committee (tentative)

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Kalliopi Kravari, Aristotle University of Thessaloniki, Greece

## 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: ***IPROSE 2022: Special Session on Intelligent Problem Solving for Smart Real World Systems***.

<https://easychair.org/conferences/?conf=aciids2022>

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 **IPROSE 2022** 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.).