

The 13th International Multi-Conference on Complexity, Informatics and Cybernetics: IMCIC 2022[©]



March 8 - 11, 2022 ~ Orlando, Florida, USA
<https://www.iis-spring22.org/imcic/>



Special Session

SMART SYSTEMS FOR FIGHTING THE COVID-19 PANDEMIC

CALL FOR PAPERS

The COVID-19 pandemic has underscored the importance of AI and Machine Learning (ML) as well as Deep learning (DL), particularly as a tool that can enable faster decision-making. In fact, DL and ML have become core technologies for IoT-based data analysis and visualization by providing a new set of algorithms and tools allowing the fast treatment and management of COVID-19 infected patients, improve workflow efficiencies, and scaling through unprecedented and uncertain times. By learning complex relationships directly from data, these kinds of algorithms are also very promising to empower an advancement along with multiple research directions such as, model/data parallelism, model/data compression, distributed optimization algorithms for DL convergence, synchronization strategies, efficient communication, and specific hardware acceleration.

The goal of this special session is to take advantage of such research advancement and decide what tailor-based designs for COVID-19 management problems; where they have to be deployed (cloud Vs. fog Vs. edge); and how to manage their life cycle (from data harvesting to decision making smart systems). In other terms, this session aims to present recent advances in the field of smart systems adopting traditional management/provisioning and optimization algorithms, AI-based models, or even hybrid approaches for real-time COVID-19 predicting and decision making with excellent and efficient performance in terms of accuracy, speed, and cost. Obviously, such smart systems might be combined with wearable, medical and/or non-medical equipment for fighting the COVID-19 pandemic.

Organizers of the special session:

- **Chair: Dr. Molka Rekik**, Assistant professor at the Information Systems Dept. PSAU, KSA & Member of the Data Engineering and Semantics Research Unit, Faculty of Sciences of Sfax, University of Sfax, Sfax, Tunisia.
- **Co-Chair: Dr. Mahdi Khemakhem**, Associate professor at the Mathematics and Business Intelligence Dept., College of Electronic and Telecommunication Engineering ENET'COM & Member of the Data Engineering and Semantics Research Unit, Faculty of Sciences of Sfax, University of Sfax, Sfax, Tunisia.

Topics: This special session gathers, but is not limited to the following topics: -

Learning for optimization COVID-19 problems.

- Optimization for learning COVID-19 systems.
- Distributed COVID-19 multi-objective satisfaction and optimization.
- Optimization under COVID-19 uncertainty.
- Optimization with incomplete or dynamic COVID-19 input data.
- Algorithms for COVID-19 real-time applications.
- Cloud, distributed, fog, edge, and grid computing for COVID-19.
- Learning and Optimization in Societally Beneficial Domains, especially in time of COVID-19 pandemic.

Important dates:

- **Submission Deadline (EXTENDED):**
December 14th, 2021
- **Notifications of acceptance:**
January 11th, 2021
- **Submission of camera-ready:**
February 4th, 2021
- **Registration Deadline:**
TBA

Participation: Participation to special session will be **Online**. For more details, you can visit the conference website: <https://www.iis-spring22.org/imcic/>

Submissions: **Extended abstracts** or **draft papers** should be submitted taking into account the following format:

- Each submission should be related to at least one of the major themes, or the special symposia, given above.
- Each submission should have a title.
- Extended abstracts should have 600 to 2000 words and draft papers should have 2000 to 5000 words, in English.
- Author(s) with names, addresses, telephone and fax numbers, and e-mail addresses should be included.
- Each author making a submission should necessarily suggest at least one or two (accordingly to the submission option selected) and a maximum of three reviewers for the open review of the submitted extended abstract or paper draft, according to the acceptance policy stated below.
- For more details, visit the following link: <https://www.iis-spring22.org/imcic/website/submissionformat.asp?vc=26>

Note:

- **Submissions should be sent via E-mail to molka.rekik@gmail.com**
- **Final acceptance of submissions will be confirmed after at least one author valid registration.**
- **All accepted and registered papers will be published in the proceedings of the 2022 International Multi-Conference on Complexity, Informatics and Cybernetics (IMCIC: <https://www.iis-spring22.org/imcic/>).**
- **The best 30% of all (invited and regular) sessions' best papers will be published in the JSCI Journal.**

Contact: For more information, please contact the special session chair:

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