



10th International Conference on Control,
Decision and Information Technologies

July 01 - 04, 2024

Valletta, Malta

CALL FOR PAPERS - SPECIAL SESSION

“Recent Advances for Resource Allocation Problems”

for **CODIT 2024**

July 01-04, 2023 ▪ Valletta, Malta

Session Co-Chairs:

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Session description:

In numerous technological and industrial systems, agents compete or cooperate for resources. Such systems encompass a diverse array of physical infrastructures stemming from contemporary technologies, including manufacturing, transportation, logistics, database management, communication protocols, computer networks, distributed software, and cyber-physical systems. Resource allocation problems may also arise in economics, social and living systems.

This special session deals with resource allocation problems under the perspective of modelling, analysis, control and optimization. Various modelling frameworks exist for resource allocation systems, such as Petri nets, automata, process algebras, rewriting logic, Markov chains, queues, and max-plus algebras. Recent endeavors have yielded significant progress in modelling, analysis, control, and scheduling resource allocation systems.

The goal is to present recent advances in analysis, control, and optimization of resource allocation systems based on formal methods including modelling, property analysis, supervisory control, scheduling, performance evaluations, as well as system security and privacy. Prospective authors are invited to share their academic results and practical experiences to deal with these challenging issues in this area.

The topics of interest include, but are not limited to:

- Models (qualitative and/or quantitative) for the specification of behaviors and/or properties: Automata, Petri nets, Process algebras, Rewriting logic, Markov chains, Queues, Max-plus algebras, ...
- Centralized / decentralized / distributive settings,
- Property analysis: liveness, boundedness, opacity, diagnosability, controllability, security, reliability, fault diagnosis, state estimation, ...

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- Control: resilient control; robust control, adaptive control, supervisory control, controller synthesis, supervision, monitoring, ...
- Optimization and scheduling: optimal scheduling, multi-objective, multi-task, and multi-constraint optimization, learning-based formal methods, scheduling of RASs under resource failures and system reconfiguration, ...
- Application to manufacturing, computer science, logistics, ecosystems, robotics....

SUBMISSION

Papers must be submitted electronically for peer review through PaperCept by **February 03, 2024**: <http://controls.papercapt.net/conferences/scripts/start.pl>. In PaperCept, click on the **CoDIT 2024** link “Submit a Contribution to CoDIT 2024” and follow the steps.

IMPORTANT: All papers must be written in English and should describe original work. The length of the paper is limited to a maximum of 6 pages (in the standard IEEE conference double column format).

DEADLINES

February 03, 2024: deadline for paper submission

April 14, 2024: notification of acceptance/reject

May 10, 2024: deadline for final paper and registration