



## CALL FOR PAPERS - SPECIAL SESSION

# “Graph-based Dynamics for Analysis and Design of Complex Systems”

for CODIT’22

May 17-20, 2022 ▪ Istanbul, Turkey

### Session Co-Chairs:

Prof. Belkacem Ould Bouamama, *Director of International Relations and Research at Polytech Lille, France*  
(Belkacem.Ouldbouamama@polytech-lille.fr)

Prof. Alexander S. Semenov, *Moscow Aviation Institute (National Research University), Russia*  
(Semenov\_Alex@yahoo.com)

Prof. Milka Uzunova, *University of Valenciennes, France* (milka.uzunova@univ-valenciennes.fr)

### Session description

This special session deals with the problem of structural transformation of complex systems and the identification of general principles for their scaling described by means of graph-based dynamics as well as its application for the analysis and design of complex systems. The use of graph-based dynamics opens up the possibility of self-organization of systems. For example, fractal Petri nets and their pattern classification, Bonds graphs, and cellular automata are offered a wide range of possibilities for analysis and synthesis of systems using graph theory and applied graph theory, which in many cases simplifies analysis, making it visible and subject to meaningful interpretation.

The goal is to identify the foundations of the similarity of natural phenomena based on the study of structural invariants represented by transformation graph-based models and algorithms.

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

- Elastic computing
  - Wireless mesh networks and self-organizing networks
  - Dynamic problem solutions based on cell automata and graphs
  - The solution of well-known problems by methods of graph-based dynamics and the identification of new properties
  - Dynamic generation of categories for system description
  - Visual programming and graph-based dynamics programming languages
-

---

## SUBMISSION

Papers must be submitted electronically for peer review through PaperCept by **January 07, 2022** : <http://controls.papercept.net/conferences/scripts/start.pl>. In PaperCept, click on the **CoDIT 2022 link** **“Submit a Contribution to CoDIT 2022” 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

January 07, 2022: deadline for paper submission

March 4, 2022: notification of acceptance/reject

March 30, 2022: deadline for final paper and registration