8th IFAC Conference on Analysis and Control of Nonlinear Dynamics and Chaos (ACNDC 2027)

9 – 11 June, 2027
Monte Porzio Catone (Rome)
Italy

Visit https://conferences.ifac-control.org/acndc2027/ for the latest news!

Following the tradition inaugurated by the previous joint conference, the 2027 edition of the IFAC ACNDC has the ambitious goal of bringing together experts from the fields of chaos as well as of the analysis and control of complex, nonlinear systems. These research areas provide foundational mathematical and methodological tools to several distinct topics, which are of strong interest for this IFAC meeting. Such topics include biological systems (network biology, gene regulatory networks, modelling and control of epidemics, etc.), electro-mechanical systems (power electronics, control of flexible joints, robotics, electric vehicle drive control systems), physical applications (optics, magnetics, fluidics and microfluidics, etc.), economics (game theory, optimal production and inventory control, climate-economy models, etc.), renewable energy (smart buildings, wind turbines, wave energy generation, etc.), to mention just a few. The conference will encompass and feature high-quality contributions in the interdisciplinary fields of chaos and nonlinear systems, including applications involving complex, distributed, networked or uncertain dynamics. Synchronization and control of complex interconnected models, possibly by relying on data-driven methods or on strategies inspired by hybrid dynamics, are relevant topics within the scope of this event. The aim of this event is to bring together, in the unique and fascinating location provided by the historic Villa Mondragone, the communities of control engineering, physics, economics, biology, fluid dynamics, power electronics, electronic circuits, etc. with an opportunity to exchange information and new ideas and to discuss new developments in the field of chaos control and synchronization. These topics will be addressed both in terms of theoretical contributions as well as by envisioning practical implementations. The conference aims also at directly involving students and young researchers in order to introduce them to the field of chaos and nonlinear dynamics, with applications also in various fields of engineering.

The conference will cover all topics related to chaos and synchronization within the framework of control systems theory and engineering, including (but not limited to) the following:

- Control of complex systems
- Analysis and control of nonlinear systems
- Bifurcations in complex systems
- Nonlinear time series and identification
- Limit cycles in networks of oscillators
- Climate models
- Control Applications

Special issue on

Important dates

Initial Paper Submission
30 October 2026

Acceptance Notification
1 March 2027

Final Paper Submission
2 April 2027

Special Issue Opens
7 April 2027

Conference Days
9 – 11 June 2027

National Organizing Committee

Mario Sassano (NOC Chair)
Laura Menini (NOC Co-chair)
Silvia Mastellone (NOC Vice-chair)

International Program Committee

Isabelle Queinnec (IPC Chair)
Jorge Poveda (IPC Co-chair)
Philipp Braun (IPC Vice-chair)
Corrado Possieri (Programme Chair)
Thulasi Mylvaganam (Editor)
Sergio Galeani (Co-editor)
Giorgio Valmorbida (Invited sessions chair)

Conference website

IFAC -TC 2.3
Non Linear Control Systems

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