# 3RD IFAC/IEEE CSS WORKSHOP ON CONTROL OF SYSTEMS GOVERNED BY PARTIAL DIFFERENTIAL EQUATIONS CPDE 2019 AND XI WORKSHOP CONTROL OF DISTRIBUTED PARAMETER SYSTEMS, CDPS 2019.

## CDPS-CPDE 2019, Oaxaca, Mexico. 20-24 May, 2019

**Sponsored by**
IFAC International Federation of Automatic Control, IFAC TC Distributed Parameter Systems, IEEE CSS
**Co-sponsored by**
IFAC TC Non Linear Control Systems
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**Important dates**
Submission Deadline: December 20, 2018
Author's notification February 12, 2019
Final Paper Submission: March 15, 2019

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## INVITATION

The Organizing Committee has the pleasure to invite you to participate in the 3rd IFAC/IEEE CSS Workshop on Control of Systems Governed by Partial Differential Equations (CPDE 2019) and XI Workshop on Control of Distributed Parameter Systems (CDPS 2019) to be held in Oaxaca, Mexico, May 20-24, 2019. https://www.visitmexico.com/en/main-destinations/oaxaca

## SCOPE

Distributed parameter systems, which are mathematically described by partial differential equations, impose a formidable challenge in many applications coming from classical industrial fields as well as emerging sectors related to energy, transport, communication or medical science. Herein, the distributed parameter description becomes an essential ingredient of the modelling and analysis process if the spatial or property distribution of the system variables cannot be neglected. The dynamic operation of these distributed parameter systems essentially relies on the incorporation of suitable controland estimation strategies to influence the system dynamics, and to enlarge the dynamic operating range. Starting from these observations, new approaches to the control of distributed parameter systems directly exploit the structural system properties to develop dedicated analysis and design techniques to address the spatial-temporal system dynamics.

## TOPICS

The topics of the workshop will cover new and state-of-the-art developments in modeling and control of distributed parameter systems and its application. This covers approaches and techniques for the modeling, analysis, control, and observer/estimator design for systems governed by partial differential equations and includes (but is not limited to) methods such as differential geometric and algebraic approaches, semigroup and operator theory, Lyapunov-based and backstepping techniques, passivity and dissipativity, optimal control, controllability and observability analysis, stability theory, model reduction for control, computational methods, real-time control, actuator and sensor placement, experimental design.

In addition, applications are considered covering, e.g., smart and adaptive structures in mechatronics, marine systems and aerospace engineering, flow control, energy generation, distribution and storage, process intensification and process systems engineering, adaptive optics, quantum systems, distributed cooperative systems, communication, embedded actuators and sensors, traffic control and network congestion, and flexible micro-structures.

## SUMMER SCHOOL

To enlarge the community of researchers working in modelling and control of distributed parameter systems, an introductory summer school entitled "An introduction to modelling and control of systems governed by PDEs" is organised before the workshop in the same location from Thursday to Saturday 16-18 May 2019.

## PLENARY SPEAKERS

**Thomas Meurer**, Faculty of Engineering, Christian-Albrechts-University of Kiel, Germany.
**Emilia Fridman**, Department of Electrical Engineering and Systems, Tel Aviv University, Israel
**Manuel González Burgos**, Faculty of Mathematics, University of Sevilla, Spain.
**Yuri Orlov**, Department of Electronics and Telecommunications, CICESE, Ensenada, Mexico
**Nicolas Burq**, Department of Mathematics, Universite Paris-Sud, Orsay, France.

For more information, visit: http://www.smm.org.mx/eventos/cdps-cpde/