Newsletter n°1 of the IFAC TC 2.6 on Distributed Parameter Systems

We are proud to introduce the newsletter of the IFAC TC 2.6, which aim is to give trimester updates on related activities, events and announcements.

The aim of this technical committee is to foster developments of both theoretical approaches and emerging applications in the field of **Distributed Parameter Systems** (DPS) i.e. infinite dimensional systems described by partial differential equations (PDEs) or delays. The positioning of this Technical Committee is clearly at a control system theory level and aims at addressing various topics such as: modelling, analysis, estimation, simulation, observation, and control, taking all the specificities of the infinite dimension into account.

The **TC Chair and Vice-Chairs** for the period 2020-2022 are

Yann Le Gorrec (c), Ralph C. Smith (vc), Hans Zwart (education), Thomas Meurer (publications), Delphine Bresch-Pietri (industry) and Hector Ramirez (social medias).

Feel free to send us your updates, announcements, job-offers etc., and we shall include them in future newsletters.

Upcoming events

- American Control Conference (ACC), New Orleans, Louisiana, USA, May 26-28, 2021.
- SIAM Conference on Control and Its Applications, Spokane, Washington USA, June 19-21, 2021.
- European Control Connference, Rotterdam, The Netherlands, June 29 – July 2, 2021.
- 12th Workshop on Control of Ditributed Parameter Systems, Warwick, UK, August 16-20, 2021 (to be confirmed)
- 24th International Symposium on Mathematical Theory of Networks and Systems (MTNS), Cambridge, UK, August 23-27, 2021.
- 3rd IFAC Conference on Modelling, Identification and Control of Nonlinear Systems MICNON 2021, Tokyo, Japan, September 15-17, 2021.
- 7th IFAC Workshop on Lagrangian and Hamiltonian Methods for Non Linear Control Berlin, Germany, October 16-18, 2021 (to be confirmed)
- 60th IEEE Conference on Decision and Control Austin, USA, December 13-15, 2021.

Ongoing virtual seminars

- The online seminar **Control in Times of Crisis**. This scientific activity is a continuation of the seminar Control en Tiempos de Crisis, this time addressing the international community interested in mathematical problems dealing with control of differential equations, inverse problems and related subjects. The seminar take place on Thursday at 17:00 H Central European Time (UTC+2), in the platform Zoom, and alternates talks of senior and junior researchers. http://ctcseminar.mat.utfsm.cl/
- The **DPS Online Seminar** aims to foster collaboration and contact between people working on control and estimation of DPS. Speakers don't necessarily need to present only new, cutting edge results, but can introduce an active (or prospective) area of research. This seminar is open both for senior researchers and early-career researchers who wish to have an opportunity to present their work. The Seminar is hosted online on Zoom every other Tuesday 17-18 (Paris-Madrid-Berlin Time), 8-9 am (PDT), 11 am-12 pm (EDT). http://aero.us.es/DPSOnlineSeminar/Seminar.html
- The **CCA seminars** are organized in the context of the Chair in Applied Analysis – Alexander von Humboldt Professorship led by Enrique Zuazua at FAU Erlangen-Nürnberg. https://caa-avh.nat.fau.eu/upcoming-events/

Special issues

- Topical collection on Input To State Stability in Mathematics of Control, Signals, and Systems (https://www.springer.com/journal/498)
https://link.springer.com/journal/498/topicalCollection/AC_3e7252609cea66be06ee665346d47533/page/1

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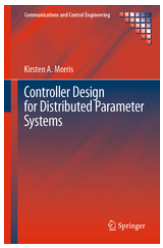
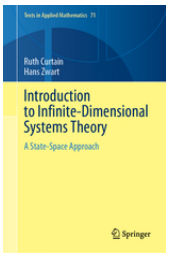
Recently published books



Controller Design for Distributed Parameter Systems (2020)
Morris, Kirsten A.
Springer-Verlag New York
Communications and Control Engineering
285 Pages
ISBN 978-3-030-34949-3



Introduction to Infinite-Dimensional Systems Theory
A State-Space Approach (2020)
Curtain, Ruth, **Zwart**, Hans
Springer-Verlag New York
752 pages
ISBN 978-1-0716-0590-5

PhD and Postdoctoral positions:

FAU Erlangen-Nürnberg
Hyperbolic and parabolic dynamics on networks and random batch methods for control
https://caa-avh.nat.fau.eu/phd-and-postdoc-positions-in-applied-mathematics/
Deadline: 01/07/2021

Recently graduated Ph.D students

- **Luis Mora Araque**, "*Port-Hamiltonian Modeling of Fluid-Structure Interactions in a Longitudinal Domain*", Université Bourgogne Franche-Comté, France, Universidad Técnica Federico Santa Maria Chile, December 2020.
- **Ning Liu**, "Port-Hamiltonian modeling and distributed control of flexible structures: application to bio-medical endoscopes with electro-active polymer actuators", Université Bourgogne Franche-Comté, December 2020.
- **Andrea Brugnoli**, "A port-Hamiltonian formulation of flexible structures: modelling and structure-preserving finite element discretization", Institut Supérieur de l'Aéronautique et de l'Espace, November 2020.
- **Anass Serhani**, "Systèmes couplés d'EDPs, vus comme des systèmes Hamiltoniens à ports avec dissipation: analyse théorique et simulation numérique", Institut Supérieur de l'Aéronautique et de l'Espace, September, 2020.

The IFAC TC 2.6 on Social Networks

- **Tweeter @6Ifac**
- **Facebook IFAC TC 2.6**

We wish you all a safe and Happy New Year 2021 ….

Web page: https://tc.ifac-control.org/2/6