

# Pauline Kergus

Born November 25, 1992

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## Education

- 2016–2019 **PhD in Automatic Control**, ONERA, Toulouse, France.  
Supervision: [Charles Poussot-Vassal](#) and Fabrice Demourant.  
Title: "Data-driven model reference control in the frequency-domain: From model reference selection to controller validation."  
Thesis available at [tel-3084374](#)
- 2015 **UNICAMP**, State University of Campinas, Campinas, Brazil.
- 2012–2015 **Ecole Centrale de Lyon**, Lyon, France.

## Experience

- Since **Researcher**, LAPLACE - CNRS, Toulouse, France.
- 01/2022 My research activities revolve around developing data-driven and learning-based approaches for modeling, control and analysis of energy systems.
- 2020–2021 **Postdoctoral fellow**, Automatic control department, LTH, Lund, Sweden.  
Postdoc position within the ERC project [Scalable Control of Interconnected Systems](#) with Prof. [Anders Rantzer](#), working on modelling and control of district heating networks.
- 2019–2021 **Research project**, DEIB, Politecnico di Milano, Milano, Italy.  
Management of water resources in the Hoa Binh reservoir (Vietnam) in collaboration with [Simone Formentin](#), [Matteo Giuliani](#) and [Andrea Castelletti](#).
- 2016–2019 **PhD thesis**, ONERA, Toulouse, France.  
Supervision: [Charles Poussot-Vassal](#) and Fabrice Demourant.  
Title: "Data-driven model reference control in the frequency-domain: From model reference selection to controller validation."  
Development of a data-driven control framework. Thesis available at [tel-3084374](#)
- 2016–2019 **Teacher assistant**, ENSEEIHT, Toulouse, France.

## Scientific activities

- **Publications:** 1 invited book chapter, 8 journal papers (peer-reviewed), 12 conference papers (peer-reviewed)
- **Supervision:** 6 PhD students, 2 postdoc, 9 master thesis.
- **Reviewer** for *Automatica* and *Transactions on Automatic Control*, and for various international conferences.
- **Teaching:**
  - *Converter control*, 10hrs/year for master students in the [Advanced Master Embedded Systems](#) (joint program between ISAE SUPAERO and ENSEEIHT), since 2023.
  - *Commande adaptative et prédictive*, 10hrs/year for master students at ENSEEIHT in the [ACISE](#) specialty (control architecture and embedded systems), since 2023.

○ **Editorial activities:**

- Associate editor for IEEE Control System Letter starting January 2025.
- International Program Committee member for the 11th IFAC Vienna International Conference on Mathematical Modelling (MATHMOD 2025).
- Member of the Technical Program Committee for [CDC 2024](#).
- Member of IFAC TC1.1 Modelling, Identification and Signal Processing since end of 2023
- Member of the Conference Editorial Board of the IEEE Control Systems Society since July 2022.
- International Program Committee member for the 2nd IFAC Workshop on Control Methods for Water Resource Systems (CMWRS 2022).

○ **Other activities:**

- Organization committees: HANDY Workshop (2022), Numelec 2024, SGE 2025.
- 4 PhD defence committees as examiner
- Member of 2 recruitment committees for *maître de conférence*
- Member of Femmes & Sciences since January 2024 : participation to the mentoring program and to school events.