Yubo Bai

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Date of Birth:	February 02, 1998
Place of birth:	Jiayuguan, Gansu Province, China
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Date: September 17, 2025

Research experience

Sep. 2025 – Present **Postdoctoral Researcher in Stabilization of Evolution Systems**
CERMICS, École nationale des ponts et chaussées, Champs-sur-Marne, France
Supervisor: Amaury Hayat

Jan. 2023 – Jan. 2025 **Visiting Ph.D. student in Boundary Control of Partial Differential Equations**
Gipsa-lab, Univ. Grenoble Alpes, Grenoble, France
Supervisor: Christophe Prieur

Education

Sep. 2021 – Jun. 2025 **Ph.D. in Applied Mathematics (Control of Partial Differential Equations)**
School of mathematical Sciences, Fudan University, Shanghai, China
Integrated M.S. to Ph.D. Program
Thesis title: Control problems of two types of partial differential equations
Advisor: Zhiqiang Wang, co-advisor: Christophe Prieur

Sep. 2019 – Jun. 2021 **M.S. student in Applied Mathematics**
School of mathematical Sciences, Fudan University, Shanghai, China
Transitioned to Ph.D. program in Sep. 2021 as part of the integrated M.S. to Ph.D. program.

Sep. 2015 – Jun. 2019 **B.S. in Mathematics and Applied Mathematics**
School of mathematical Sciences, Fudan University, Shanghai, China

Talks

Jun. 2025 **Finite-time observer for a time-varying cascade of an ODE in a system of balance laws**
5th IFAC Workshop on Control of Systems Governed by Partial Differential Equations (CPDE 2025), Beijing, China

May 2024 **Finite-time output regulation for time-varying 2×2 hyperbolic systems**

2ème Congrès SAGIP (minisymposium), Lyon, France

Publications

Preprint:

- Yubo Bai, Christophe Prieur, and Zhiqiang Wang, Finite-time output regulation for homogeneous quasilinear hyperbolic systems, submitted.

Journal articles:

- Yubo Bai, Christophe Prieur, and Zhiqiang Wang, Finite-time output regulation for time-varying 2×2 hyperbolic systems, *IMA Journal of Mathematical Control and Information*, vol. 42 (3), pp. dnaf024, 2025.
- Yubo Bai, Christophe Prieur, and Zhiqiang Wang, Finite-time output regulation for linear time-varying hyperbolic balance laws, *SIAM Journal on Control and Optimization*, vol. 63 (4), pp. 2427-2450, 2025.
- Yubo Bai, Christophe Prieur, and Zhiqiang Wang, Exact controllability for a Rayleigh beam with piezoelectric actuator, *Systems & Control Letters*, vol. 186, pp. 105759, 2024.
- Yubo Bai, Christophe Prieur, and Zhiqiang Wang, Stabilization of a Rayleigh beam with collocated piezoelectric sensor/actuator, *Evolution Equations and Control Theory*, vol. 13 (1), pp. 67-97, 2024.

Conference papers:

- Yubo Bai, Christophe Prieur, and Zhiqiang Wang, Finite-time observer for a time-varying cascade of an ODE in a system of balance laws, *IFAC-PapersOnLine*, vol. 59 (8), pp. 137-142, 2025, 5th IFAC Workshop on Control of Systems Governed by Partial Differential Equations - CPDE 2025.
- Yubo Bai, Christophe Prieur, and Zhiqiang Wang, A note on controllability and non-controllability for a Rayleigh beam with piezoelectric actuator, *SIAM Conference on Control and Its Applications (CT'23)*, Philadelphia (PA), USA, 2023.