

# Jing Yu

185 Stevens Way  
Seattle, WA 98195

Email : jing5@uw.edu  
Website : www.jingyu.io

## Education

---

<b>California Institute of Technology</b> <i>Ph.D. in Control and Dynamical Systems</i>	<i>Pasadena, CA</i> 2024
<b>Georgia Institute of Technology</b> <i>B.S. in Mechanical Engineering</i>	<i>Atlanta, GA</i> 2017

## Academic Appointments

---

<b>University of Washington</b> <i>Assistant Professor, Electrical and Computer Engineering</i>	<i>Seattle, WA</i> Sep 2025 – Present
<b>University of Illinois Urbana-Champaign</b> <i>Joint Postdoctoral Fellow, Coordinated Science Laboratory</i>	<i>Champaign, IL</i> Mar 2025 – Aug 2025
<b>University of Michigan</b> <i>Joint Postdoctoral Fellow, Electrical Engineering and Computer Science</i>	<i>Ann Arbor, MI</i> Sep 2024 – Feb 2025

## Professional Experience

---

<b>GE Research Center</b> <i>Control and Optimization Research Intern</i>	<i>Niskayuna, NY</i> Jun 2018 – Aug 2018
<b>Medivators (STERIS)</b> <i>Innovation Engineer</i>	<i>Conroe, TX</i> Feb 2017 – Aug 2017
<b>Bosch Rexroth</b> <i>Mechanical Engineering Intern</i>	<i>Fountain Inn, SC</i> Aug 2015 – Dec 2015

## Selected Honors and Awards

---

<b>ACM SIGEnergy Doctoral Dissertation Award – Honorable Mention</b>	2025
<b>Caltech Computing and Mathematical Sciences Amori Doctoral Prize</b>	2024
<b>UIUC Grainger Distinguished Postdoctoral Fellowship</b>	2024
<b>Amazon AI4Science Fellowship</b>	2023
<b>ACM e-Energy Best Paper Award Finalist</b>	2022
<b>Georgia Tech President’s Undergraduate Research Award</b>	2016

## Patents

---

<b>Systems and methods for downbeam camera data for additive machines</b> <i>U.S. Patent Application 16/818,650 (Published)</i>	2021
<b>Composition for cleaning and assessing cleanliness in real-time</b> <i>U.S. Patent Application 17/289,488 (Published)</i>	2022

# Publications

---

\* denotes equal contribution

- [P18] Y. Wu, R. Wu **J. Yu**, T. Li. Multi-Source Predictive Distributed Voltage Control. IEEE Transactions on Power Systems (TPS), submitted, 2026.
- [P17] Y. Wu, **J. Yu**, T. Li. System-Level Performance and Communication Tradeoff in Networked Control with Predictions. IEEE Transactions on Automatic Control (TAC), submitted, 2025.
- [P16] H. Yi, C. Lu. **J. Yu**, Achieving  $\tilde{\mathcal{O}}(1/T)$  Sample Complexity for Bilinear Dynamical Systems Identification under Bounded Noise. IEEE Control Systems Letters (LCSS), 2026. [\[pdf\]](#)
- [P15] Z. Xiong, **J. Yu**, N. Ozay. System Identification Under Bounded Noise: Optimal Rates Beyond Least Squares. IEEE Control Systems Letters (LCSS), 2025. [\[pdf\]](#)
- [P14] M. Yang, **J. Yu**, N. Ozay. Safe Control of Multi-Agent Systems with Minimal Communication. IEEE Conference on Decision and Control (CDC), 2025. [\[pdf\]](#)
- [P13] Y. Wu, **J. Yu**, T. Li. PREDLS: A Unified Framework for Distributed Predictive Control. IEEE Conference on Decision and Control (CDC), 2025. [\[pdf\]](#)
- [P12] **J. Yu**, T. Zhang, O. Ardakanian, and A. Wierman. Online Comfort-Constrained HVAC Control via Feature Transfer. Proceedings of the Sixteenth ACM International Conference on Future Energy Systems (ACM e-Energy), 2025. [\[pdf\]](#)
- [P11] Y. Li\*, **J. Yu\***, L. Conger, T. Kargin, and A. Wierman. Learning the Uncertainty Sets for Control Dynamics via Set Membership: A Non-Asymptotic Analysis. Forty-first International Conference on Machine Learning (ICML), 2024. [\[pdf\]](#)
- [P10] C. Yeh, **J. Yu**, Y. Shi, and A. Wierman. Online Learning for Robust Voltage Control under Uncertain Grid Topology. IEEE Transactions on Smart Grid, 2024. [\[pdf\]](#)
- [P9] **J. Yu**, V. Gupta, and A. Wierman. Online Stabilization of Unknown Linear Time-Varying Systems. IEEE Conference on Decision and Control (CDC), 2023. [\[pdf\]](#)
- [P8] **J. Yu**, D. Ho, and A. Wierman. Online Adversarial Stabilization of Unknown Networked Systems. Proceedings of the ACM on Measurement and Analysis of Computing Systems (ACM SIGMETRICS), 2023. [\[pdf\]](#).
- [P7] C. Yeh, **J. Yu**, Y. Shi, and A. Wierman. Robust Online Voltage Control with an Unknown Grid Topology. Proceedings of the Thirteenth ACM International Conference on Future Energy Systems (ACM e-Energy), 2022. **Best paper award finalist.** [\[pdf\]](#)
- [P6] O. Kjellqvist\*, and **J. Yu\***. On Infinite-horizon System Level Synthesis. IEEE Conference on Decision and Control (CDC), 2022. [\[pdf\]](#)
- [P5] **J. Yu**, Y.S. Wang, and J. Anderson. Localized and Distributed H2 State Feedback Control. IEEE American Control Conference (ACC), 2021. [\[pdf\]](#)
- [P4] **J. Yu**, C. Gehring, F. Schäfer, and A. Anandkumar. Robust Reinforcement Learning: A Constrained Game-theoretic Approach. PMLR Learning for Dynamics and Control (L4DC), 2021. [\[pdf\]](#)
- [P3] **J. Yu\***, and D. Ho\*. Achieving Performance and Safety in Large Scale Systems with Saturation Using a Nonlinear System Level Synthesis Approach. IEEE American Control Conference (ACC), 2020. [\[pdf\]](#)

- [P2] R. Lynn, M. Dinar, N. Huang, J. Collins, **J. Yu**, C. Greer, T. Tucker, and T. Kurfess. Direct Digital Subtractive Manufacturing of a Functional Assembly using Voxel-based Models. *ASME Journal of Manufacturing Science and Engineering*, 2018. [[pdf](#)]
- [P1] **J. Yu**, R. Lynn, T. Tucker, C. Saldana, and T. Kurfess. Model-free Subtractive Manufacturing from Computed Tomography Data. *ASME Manufacturing Letters*, 2017. [[pdf](#)]

## Invited Seminars and Workshop Talks

---

- [T15] “Set-based adversarial online control of unknown systems.”, Invited talk at the AI Institute in Dynamic Systems, Seattle, WA. (Nov 2025)
- [T14] “Uncertainty-driven learning and control for sustainable energy systems.”, Invited award talk at ACM BuildSys Conference, Golden, CO. (Nov 2025)
- [T13] “Set-based adversarial online control of unknown systems.”, Invited talk at the IEEE American Control Conference (ACC) Workshop on Learning and Set-based Control, Boulder, CO. (Jul 2025)
- [T12] “Learning and control for large-scale sustainable energy systems.”, Invited talk at the Control Seminar, University of Michigan, Ann Arbor, MI. (Jan 2025)
- [T11] “Learning and control for large-scale sustainable energy systems.”, Invited talk at the Control and Robotics Seminar, Michigan State University, East Lansing, MI. (Nov 2024)
- [T10] “Learning and control for large-scale sustainable energy systems.”, Invited talk at the ROSEI Seminar, Johns Hopkins University, Baltimore, MD. (Apr 2024)
- [T9] “Learning and control for large-scale sustainable energy systems.”, Invited talk at the University of British Columbia, Vancouver, BC, Canada. (Mar 2024)
- [T8] “Learning and control for large-scale sustainable energy systems.”, Invited talk at Carnegie Mellon University, Pittsburgh, PA. (Feb 2024)
- [T7] “Learning and control for large-scale sustainable energy systems.”, Invited talk at the University of Washington, Seattle, WA. (Feb 2024)
- [T6] “Scalable, robust, and adaptive learning and control for sustainable energy systems.”, Invited talk at the University of Texas at Austin, Austin, TX. (Aug 2023)
- [T5] “Robust online control for energy systems via online learning.”, Invited talk at the University of British Columbia, Vancouver, BC, Canada. (Jul 2023)
- [T4] “Online stabilization of unknown linear systems via online learning.”, Invited talk at IEEE American Control Conference (ACC) Workshop on Online Optimization Methods for Data-Driven Feedback Control, San Diego, CA. (May 2023)
- [T3] “Robust online control via online learning.”, Invited talk at the ControlX Seminar Series, University of Washington, Seattle, WA. (Jan 2023)
- [T2] “System-level synthesis: New frontiers in distributed control.”, Workshop organizer and invited speaker at the IEEE Conference on Decision and Control, Cancun, Mexico. (Dec 2022)
- [T1] “Black-box stabilization of interconnected systems under communication constraints.”, Invited talk at the University of California, Santa Barbara, Santa Barbara, CA. (May 2022)

## Conference Talks

---

- [C10] “System identification under bounded noise: optimal rates beyond least squares.”, IEEE Conference on Decision and Control (CDC), Rio de Janeiro, Brazil. (Dec 2025)
- [C9] “Safe control of multi-agent systems with minimal communication.”, IEEE Conference on Decision and Control (CDC), Rio de Janeiro, Brazil. (Dec 2025)
- [C8] “PREDSLS: A unified framework for distributed predictive control.”, IEEE Conference on Decision and Control (CDC), Rio de Janeiro, Brazil. (Dec 2025)
- [C7] “Online stabilization of unknown linear time-varying systems.”, IEEE Conference on Decision and Control (CDC), Singapore. (Dec 2023)
- [C6] “System identification under bounded noise: optimal rates beyond least squares.’, INFORMS Applied Probability Society Conference (APS), Atlanta, GA. (Jul 2025)
- [C5] “Online adversarial stabilization of unknown networked systems.”, ACM SIGMETRICS Conference on Measurement and Analysis of Computing Systems, Orlando, FL. (Jun 2023)
- [C4] “On infinite-horizon system-level synthesis.”, IEEE Conference on Decision and Control (CDC), Cancun, Mexico. (Dec 2022)
- [C3] “Online stabilization of unknown networked systems with communication constraints.”, 39th Southern California Control Conference, University of California, Irvine, Irvine, CA. (Apr 2022)
- [C2] “Localized and distributed  $\mathcal{H}_2$  state feedback control.”, IEEE American Control Conference (ACC), Virtual. (Jun 2021)
- [C1] “Achieving performance and safety in large-scale systems with saturation using a nonlinear system-level synthesis approach.”, IEEE American Control Conference (ACC), Virtual. (Jun 2020)

## Teaching Experience

---

<b>Instructor</b> <i>EE 447 Control System Analysis I</i>	<i>University of Washington</i> <i>Spring 2026</i>
<b>Instructor</b> <i>EE 546 Multi-agent Learning and Control</i>	<i>University of Washington</i> <i>Winter 2026</i>
<b>Instructor</b> <i>AA/EE/ME 594 Robust Control</i>	<i>University of Washington</i> <i>Fall 2025</i>
<b>Teaching Assistant</b> <i>CDS 231 Robust Control Theory</i>	<i>California Institute of Technology</i> <i>Spring 2023</i>
<b>Teaching Assistant</b> <i>CDS 270 Robust Learning and Control</i>	<i>California Institute of Technology</i> <i>Winter 2021</i>
<b>Teaching Assistant</b> <i>CDS 141 Network Control Systems</i>	<i>California Institute of Technology</i> <i>Spring 2020</i>
<b>Teaching Assistant</b> <i>ACM 116 Introduction to Probability Models</i>	<i>California Institute of Technology</i> <i>Fall 2019</i>

**Teaching Assistant**  
*CS 143 Communication Networks*

*California Institute of Technology*  
*Fall 2018*

**Peer-led Undergraduate Study (PLUS) Leader**  
*Physics I, II and Calculus I, II, III*

*Georgia Institute of Technology*  
*2013 – 2016*

## Academic Service

---

**PC member and registration chair** 2025  
*ACM Sustainability Week, which co-locates ACM SIGEnergy’s flagship conferences and workshops*

**Departmental Qualifying Exam Committee Member** 2025 – Present  
*University of Washington, Department of Electrical and Computer Engineering*

**Organizer** 2023  
*“System Level Synthesis and New Frontiers” – Workshop at the IEEE CDC*

**Organizer** 2023 – 2025  
*Caltech Keller Colloquium Series*

**Advisory Council Member** 2021 – 2025  
*Caltech CMS-EE Partners Program*

**Graduate Admission Committee Member** 2021 – 2023  
*Caltech CMS AI/ML graduate admissions*

**Department Representative** 2020 – 2022  
*Caltech Graduate Student Council*

## Outreach and Mentoring

---

**Faculty Mentor | ENGINE Capstone Program** *University of Washington*  
*providing technical advice and project oversight* *2025 - present*

**Faculty Advisor | Seattle Energy Forum** *University of Washington*  
*Advising on technical focus, research, and event programming.* *2025 - present*

**Research Mentor | Sustainable Energy Activity Lab (SEAL)** *Caltech*  
*Working with high school students on a year-long sustainable energy project.* *2023*

**Research Mentor | First-year Success Research Institute (FSRI)** *Caltech*  
*Mentoring historically marginalized first-year undergraduate students on a research project.* *2023*

**Peer Advisor | Future Ignited** *Caltech*  
*Advising undergraduate students from unconventional backgrounds on graduate school applications.* *2023*

**Research Mentor | Graduate (G) and Undergraduate (U)** *Caltech*  
*Mentor of Agnim Agarwal (U), Lauren Conger (G), Eric Ma (U), Patrick Martinez (U).* *2021 – 2023*

**Math and Science Tutor | Caltech Y RISE Program** *Caltech*  
*Tutored local middle and high school students in math and science subjects.* *2018 – 2020*

**Outreach Organizer | Department of Computing and Mathematical Sciences**

*Organizing departmental outreach events for the Pasadena community.*

*Caltech*

*2017 – 2018*

**Instructor | Georgia Tech Invention Studio**

*Teaching prototyping machines and organizing outreach workshops for local high schools.*

*Georgia Tech*

*2014 – 2016*