

CHANG LIU

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ACADEMIC EMPLOYMENT

University of Connecticut *8/2023 - now*
Assistant Professor in School of Mechanical, Aerospace, and Manufacturing Engineering
Affiliated Faculty in Center for Clean Energy Engineering (C2E2)
Affiliated Faculty in Connecticut Institute for Resilience and Climate Adaptation (CIRCA)
Woods Hole Oceanographic Institution *2024, 2025*
Staff Member of Geophysical Fluid Dynamics Program
University of California, Berkeley *8/2021 - 7/2023*
Postdoctoral Scholar - Employee in Department of Physics (Advisor: Edgar Knobloch)

EDUCATION

Johns Hopkins University *8/2017 - 8/2021*
Ph.D. in Mechanical Engineering (Advisor: Dennice F. Gayme) *8/2021*
Dissertation title: Feedback interconnection based input-output analysis of spatio-temporal response in wall-bounded shear flows (committees: C. P. Caulfield, C. Meneveau, and D. F. Gayme)
M.S.E. in Applied Mathematics and Statistics *5/2021*
M.S.E. in Mechanical Engineering *8/2020*
Shanghai Jiao Tong University *9/2013 - 7/2017*
B.E. in Naval Architecture and Ocean Engineering (Advisor: Shixiao Fu)
Bachelor Thesis: Hydrodynamics of Flexible Riser Under Vortex-induced Vibration (**Top 1% Award**)
B.E. in Computer Technology and Application (Advisor: Minyi Guo)

EXTERNL FUNDING SUPPORT

EF3. National Science Foundation “CAREER: Nonlinear stability, input-output analysis, and control of time-varying wall-bounded shear flows” \$529,999 (Sole PI) *02/2026-01/2031*

EF2. NASA Connecticut Space Grant Consortium Faculty Research Award P-2104 “Quantum computation of hydrodynamic stability: from aerospace to convection in the Sun” \$9993 (Sole PI) *01/2024-07/2024*

EF1. Connecticut Sea Grant Professional Development Award PD-23-07 “Settling enhanced mixing in stably stratified flows” \$3312 (Sole PI) *01/2024-07/2024*

INTERNAL FUNDING SUPPORT

IF2. UConn Research Excellence Program “Nonlinear stability of time-dependent flows based on convex optimizations” \$25,000 (Sole PI) *05/2024-12/2025*

IF1. UConn Quantum Innovation Seed Grants “Quantum-assisted stability analysis of unsteady flow: from aerospace to oceanography” \$49,999 (Leading PI, my share \$26,500.37) *01/2024-8/2025*

COMPUTATIONAL RESOURCES

- CR7. IBM Quantum Credits “Quantum computation of hydrodynamic stability: from aerospace to convection in the Sun” (Sole PI) 12 hours of Qiskit runtime usage \approx \$70,000 04/2024-04/2025
- CR6. National Laboratory of the Rockies FY26 Allocation “Multi-physics driven topology optimization subject to time-varying boundary conditions” (Sole PI) 150K Node hours (\approx 1.5M CPU hours) 10/2024-09/2025
- CR5. National Renewable Energy Laboratory FY25 Allocation “Reduced-order modeling of fluid dynamics” (Sole PI) 150K Node hours (\approx 1.5M CPU hours) 10/2024-09/2025
- CR4. NSF ACCESS Discover PHY240243 “Thermohaline-shear instability and its influence on ice melting in Polar regions” (Sole PI) 1.5M CPU hours 04/2025-04/2026
- CR3. NSF ACCESS Explore PHY240243 “Thermohaline-shear instability and its influence on ice melting in Polar regions” (Sole PI) 400K CPU hours 09/2024-04/2025
- CR2. NSF ACCESS Discover PHY230056 “Role of geometry in two-dimensional fluid flows: from geophysical turbulence to inclined porous medium convection” (Co-PI) 1.5M CPU Hours \approx \$7500 04/2024-04/2025
- CR1. NSF ACCESS Explore PHY230056 “Role of domain geometry in two-dimensional fluid flows: from turbulence in anisotropic domains to inclined porous medium convection” (Co-PI) 600K CPU Hours \approx \$3000 04/2023-04/2024

TRAVEL SUPPORT AND PROFESSIONAL DEVELOPMENT

- TS7. Travel funds to visit Woods Hole Oceanographic Institution (WHOI) for the 66th year of the Geophysical Fluid Dynamics Program \$3200 2026
- TS6. Travel funds to visit Woods Hole Oceanographic Institution (WHOI) for the 65th year of the Geophysical Fluid Dynamics Program \$2400 2025
- TS5. Travel funds to visit Woods Hole Oceanographic Institution (WHOI) for the 64th year of the Geophysical Fluid Dynamics Program \$1600 2024
- TS4. AAUP/OVPR Travel Award \$2200 5/2024, 05/2025
- TS3. Deanery funds for Professional Development on Quantum Computing \$1391.40 2023
- TS2. Junior Researcher Grant for “Flow, Turbulence, and Wind Energy” symposium \$915.50 2023
- TS1. Berkeley Postdoctoral Association Professional Development Award \$1250 2023

PENDING FUNDING SUPPORT

- PF10. Google.org “Parameterizing ocean vertical mixing induced by breaking waves and Langmuir circulations using multifidelity neural stochastic operators” \$1,045,403 (Leading PI, my share: \$357,702) 01/2027-12/2029
- PF9. Department of Energy Genesis Mission “AI-accelerated topology optimization for the thermal-fluid-structural design of heat exchanging devices under unsteady thermal loads” \$750,000 (UConn portion: \$350,000) (Leading PI, my share: \$119,000) 07/2026-03/2027

- PF8. NVIDIA “HydraTwin3D: A GPU-Accelerated Multiscale Flood Digital Twin for Rapid Regional Inundation and Local 3D Flow Prediction” (Co-PI, my share: 30%) 30,000 NVIDIA H100 80 GB hours 09/2026-08/2027
- PF7. Long Island Sound Study “Assessing Marine Heatwave Impacts on LIS Hypoxia and Physics-Informed Neural Network Modeling” \$500,000 (Leading PI, preproposal) 01/2027-12/2028
- PF6. Sloan Foundation “Impacts of extreme weather and AI data centers on grid resilience and energy market” \$250,000 (Sole PI, Letter of Inquiry) 01/2027-12/2029
- PF5. American Chemistry Society Petroleum Research Fund Doctoral New Investigator (DNI) Grants “CO₂ transport in large-scale inclined shale reservoirs” \$110,000 (Sole PI) 09/2027-08/2029
- PF4. Naval Surface Warfare Center Carderock Division (NSWCCD) “Uncovering Spatiotemporal Dynamics of Large-Scale Structures in Rough-wall Turbulent Flows” \$337,430 (Sole PI) 01/2027-12/2029
- PF3. National Science Foundation “CyberTraining: Pilot: Training the Research Workforce in Data-Intensive HPC-Cloud Workflows” \$294,874 + \$5125 CloudBank resources (Leading PI, my credit: 66%) 09/2026-08/2027
- PF2. National Science Foundation “Elements: Breaking Storage and Memory Barriers in HPC: A Unified Cyberinfrastructure for Scientific Computing Workflows” \$600,000 (Co-PI, my share: \$ 200,000) 07/2026-07/2029
- PF1. National Science Foundation “Collaborative Research: NSFGE0-DFG: Influence of shear flows on ice-shelf basal melting in extreme parameter regimes” \$280,000 10/2025-09/2028

AWARDS AND HONORS

<i>National Science Foundation CAREER Award</i>	2026
<i>Nominated for Office of Undergraduate Research Mentorship Excellence Awards</i>	2025,2026
<i>Nominated for Faculty Career Advocate of the Year Award</i>	2025
<i>Early Bird Award of the 101 New England Complex Fluids Conference</i>	2024
<i>Berkeley Postdoctoral Association Professional Development Award (\$1250)</i>	2023
<i>Corrsin-Kovaszny Outstanding Paper Award (\$500)</i>	2021
<i>Creel Family Teaching Assistant Award (\$500)</i>	2019
<i>Outstanding Contribution Award of Chun-Tsung Foundation</i>	2018
<i>Excellent Bachelor Thesis (Top 1%) in Shanghai Jiao Tong University</i>	2017
<i>Hongyi Scholarship (¥25,000)</i>	2016
<i>Class NK Sholarship (¥5,000)</i>	2016
<i>Chun-Tsung Scholar (¥16,000)</i>	2016
<i>Fan, Xuji Scholarship (¥10,000 per year)</i>	2015
<i>National Scholarship (¥8000)</i>	2014

JOURNAL ARTICLES

*: corresponding author, ___: research mentee

- J34. J. George, C. Liu “Biglobal input–output analysis of separated flow over a periodic hill” *Flow* (Under Review)
- J33. V.D. Nguyen, C. Liu “Exact Coherent Structures of Sheared Double-Diffusive Convection” *Journal of Fluid Mechanics* (Under Review) [Data and Code](#)
- J32. J. Song, T. Wu, C. Wu, C. Liu*, G. He* “Structured input–output analysis of compliant wall turbulence” *Journal of Fluid Mechanics* (Accepted) [Data and Code](#)
- J31. X. Fu, S. Fu*, C. Liu, J. Shen, Z. Niu “Vortex-induced vibration hydrodynamic of a flexible pipe in bidirectionally sheared flows” *Journal of Fluid Mechanics* (Accepted)
- J30. J. Liu, C. Liu, Y. Ke, W. Chen, K. Shum, K.T. Tse, G. Hu* “Spatiotemporal wall pressure forecast of a rectangular cylinder with physics-aware DeepU-Fourier neural network” *Physics of Fluids* 37, 125120 [Data and Code](#)
- J29. A. Fraser*, A. van Kan, E. Knobloch, K. Julien, C. Liu (2025) “Spontaneous generation of helical flows by salt fingers” *Journal of Fluid Mechanics* 1020, R1
- J28. Z. Wei, C. Liu* (2025) “Nonlinear input-output analysis of transitional shear flows using small-signal finite-gain \mathcal{L}_p stability” *Physical Review Fluids* 10, 103903 [Data and Code](#)
- J27. Z. Li, C. Liu, A. van Kan, E. Knobloch (2025) “Traveling spatially localized convective structures in an inclined porous medium” *Physical Review Fluids* 10, 034402 (**Featured by NSF ACCESS**)
- J26. J. Liu, K. T. Tse, G. Hu, C. Liu, B. Zhang, K. C. S. Kwok (2024) “Exploring aerodynamics of a rectangular cylinder using flow field and surface pressure synchronized testing technique” *Physics of Fluids* 36(8), 085174
- J25. T. Tsubota*, C. Liu, B. Foster, E. Knobloch (2024) “Bifurcation delay and front propagation in the real Ginzburg-Landau equation on a time-dependent domain” *Physical Review E* 109, 044210
- J24. L. Xu, A. van Kan*, C. Liu, E. Knobloch (2024) “Fluctuation-Induced Transitions in Anisotropic Two-Dimensional Turbulence” *Physical Review Fluids* 9, 064605 (**Editors’ Suggestion**)
- J23. X. Fu, S. Fu*, C. Liu, M. Zhang, Q. Hu (2024) “Data-driven approach for modelling Reynolds stress tensor with invariance preservation” *Computers & Fluids* 274, 106215
- J22. C. Liu*, M. Sharma, K. Julien, E. Knobloch (2024) “Fixed-flux Rayleigh-Bénard convection in doubly periodic domains: generation of large-scale shear” *Journal of Fluid Mechanics* 979, A19
- J21. Y. Shuai*, C. Liu, D. F. Gayme (2023) “Structured input-output analysis of oblique laminar-turbulent patterns in plane Couette-Poiseuille flow” *International Journal of Heat and Fluid Flow* 103, 109207 (**Invited**)

—Before joining UConn—

- J20. C. Liu*, A. D. Clark (2023) “Analysing the impact of bottom friction on shallow water waves over idealised bottom topographies” *Geophysical & Astrophysical Fluid Dynamics*

- J19. **C. Liu***, A. D. Clark (2023) “Semi-analytical solutions of shallow water waves with idealized bottom topographies” *Geophysical & Astrophysical Fluid Dynamics* 117(1), 35-58
- J18. **C. Liu***, K. Julien, E. Knobloch (2022) “Staircase solutions and stability in vertically confined salt-finger convection” *Journal of Fluid Mechanics* 952, A4
- J17. **C. Liu***, E. Knobloch* (2022) “Single-mode solutions for convection and double-diffusive convection in porous medium” *Fluids* 7(12), 373 (**Invited, Issue Cover**)
- J16. **C. Liu***, C. P. Caulfield, D. F. Gayme (2022) “Structured input-output analysis of stably stratified plane Couette flow” *Journal of Fluid Mechanics* 948, A10
- J15. **C. Liu***, I. Gluzman, M. Lozier, S. Midya, S. Gordeyev, F. O. Thomas, D. F. Gayme (2022) “Spatial input-output analysis of actuated turbulent boundary layers” *AIAA Journal* 60(10), 6313-6327
- J14. **C. Liu***, D. F. Gayme (2021) “Structured input-output analysis of transitional wall-bounded flows” *Journal of Fluid Mechanics* 927, A25 (**Corrsin-Kovaszny Outstanding Paper Award**)
- J13. M. Zhang, S. Fu* **C. Liu**, H. Ren, Y. Xu* (2021) “Experimental Investigation on Vortex-induced Force of a Steel Catenary Riser under in-plane vessel motion” *Marine Structures* 78, 102882
- J12. **C. Liu**, D. F. Gayme* (2020) “An input-output based analysis of convective velocity in turbulent channels” *Journal of Fluid Mechanics* 888, A32
- J11. **C. Liu***, D. F. Gayme* (2020) “Input-output inspired method for permissible perturbation amplitude of transitional wall-bounded shear flows” *Physical Review E* 102, 063108
- J10. **C. Liu**, S. Fu*, M. Zhang*, H. Ren, Y. Xu (2020) “Hydrodynamics of a flexible cylinder under modulated vortex-induced vibrations” *Journal of Fluids and Structures* 94, 102913
- J9. H. Ren, S. Fu*, **C. Liu**, M. Zhang, Y. Xu, S. Deng (2020) “Hydrodynamic Forces of a Semi-submerged Cylinder in an Oscillatory Flow” *Applied Sciences* 10(18), 6404
- J8. H. Ren, M. Zhang*, J. Cheng, P. Cao, Y. Xu, S. Fu, **C. Liu**, Y. Wang (2020) “Magnification of Hydrodynamic Coefficients on a Flexible Pipe Fitted with Helical Strakes in Oscillatory Flows” *Ocean Engineering* 210, 107543
- J7. H. Ren, M. Zhang*, J. Cheng, P. Cao, Y. Xu, S. Fu, **C. Liu** (2020) “Experimental Investigation on Vortex-induced Vibration of a Flexible Pipe under Higher Mode in an Oscillatory Flow” *Journal of Marine Science and Engineering* 8(6), 408
- J6. J. Wang, S. Fu*, R. Baarholm, M. Zhang, **C. Liu** (2019) “Global motion reconstruction of a steel catenary riser under vessel motion” *Ship and Offshore Structures* 14(5), 442-456
- J5. **C. Liu***, L. Dong (2019) “Stabilization of Lagrange points in circular restricted three-body problem: a port Hamiltonian approach” *Physics Letters A* 383, 1907-1914
- J4. **C. Liu***, L. Dong (2019) “Physics-based control education: energy, dissipation and structure assignments” *European Journal of Physics* 40(3), 035006
- J3. **C. Liu**, S. Fu*, X. Tang, M. Zhang, H. Ren (2019) “Time Varying Hydrodynamic Characteristics Identification of a Flexible Riser under Multi-frequency VIVs” *Journal of Vibration*

and *Shock* 38(1), 149-158 (In Chinese)

- J2. **C. Liu*** (2019) “Teaching control theory in physics: the port Hamiltonian framework” *College Physics* 38(10), 1 (In Chinese) (Outstanding paper award in 2019)
- J1. **C. Liu**, S. Fu*, M. Zhang, H. Ren (2018) “Time-varying hydrodynamics of a flexible riser under multi-frequency vortex-induced vibrations” *Journal of Fluids and Structures* 80, 217-244

PEER-REVIEWED CONFERENCE PROCEEDINGS

*: corresponding author, ___: research mentee

- C10. **J. George**, **C. Liu** “Structured input–output analysis of oblique turbulent bands in Waleffe flow” *LSU Symposium on Control, Learning, and Intelligent Systems 2026* (Under Review), Baton Rouge, Louisiana, USA
- C9. **K. Kochnev**, **C. Liu** “Stability Analysis of Thermohaline Convection With a Time-Varying Shear Flow Using the Lyapunov Method” *2026 American Control Conference* (Under Review), New Orleans, Louisiana, USA. [Data and Code](#)
- C8. **Z. Wei**, **W. Zhao**, **C. Liu*** “Upper bound of transient growth in accelerating and decelerating wall-driven flows using the Lyapunov method” *2026 American Control Conference* (Under Review), New Orleans, Louisiana, USA. [Data and Code](#)
- C7. **A. Rath**, **C. Liu**, D. F. Gayme (2024) “A structured input-output approach to evaluating the effects of uniform wall-suction on optimal perturbations in transitional boundary layers” *2024 Conference on Decision and Control*, Milan, Italy, pp. 7714-7719
- C6. **C. Liu***, A. D. Clark (2024) “Error bounds of constant gain least-mean-squares algorithms” 58th Annual Conference on Information Sciences and Systems, Princeton, NJ, USA
- Before joining UConn—————
- C5. **C. Liu***, **Y. Shuai**, **A. Rath**, D. F. Gayme (2023) “A structured input-output approach to characterizing optimal perturbations in wall-bounded shear flows” *2023 American Control Conference (ACC)*, San Diego, CA, USA, pp. 2319-2325
- C4. **Y. Shuai**, **C. Liu**, D. F. Gayme* (2022) “Structured input-output analysis of oblique turbulent bands in transitional plane Couette-Poiseuille flow” *12th International Symposium on Turbulence and Shear Flow Phenomena*, Osaka, Japan
- C3. **C. Liu***, I. Gluzman, M. Lozier, S. Midya, S. Gordeyev, F. O. Thomas, D. F. Gayme (2021) “Spatial input-output based modeling of large-scale structures in actuated turbulent boundary layers” *AIAA Aviation Forum* 2021-2873
- C2. **C. Liu**, D. F. Gayme* (2019) “Convective velocities of vorticity fluctuations in turbulent channel flows: an input-output based approach” *11th International Symposium on Turbulence and Shear Flow Phenomena*, Southampton, UK
- C1. **C. Liu**, S. Fu*, M. Zhang, H. Ren (2017) “Time Varying Hydrodynamics Identification of a Flexible Riser under Multi-frequency Vortex-Induced Vibrations” *36th International Conference on Ocean Offshore and Arctic Engineering* Paper No. OMAE2017-61261

TECHNICAL REPORT

- I1. M. Zhu, M. Tian, ..., **C. Liu**, ..., E. Huerta, H. Peng (2025) “Probing the Critical Point (CritPt) of AI Reasoning: a Frontier Physics Research Benchmark” Arxiv Preprint 2509.26574

INVITED PRESENTATIONS

- I16. **C. Liu** (2026) “Dynamical systems perspective of wall-bounded shear flows” *PDE/Differential Geometry Seminar, Department of Mathematics, University of Connecticut*, April 27, 2026
- I15. **C. Liu** (2026) “Double-diffusive convection from a dynamical systems perspective” *Graduate School of Oceanography, Seminar Series in Physical Oceanography, University of Rhode Island*, April 24, 2026
- I14. **C. Liu** (2026) “Double-diffusive convection from a dynamical systems perspective” *Department of Marine Sciences, University of Connecticut*, April 17, 2026
- I13. **C. Liu** (2026) “Dynamical systems perspective of wall-bounded shear flows” *Department of Mechanical Engineering, University of Houston*, February 9, 2026
- I12. **C. Liu** (2025) “Dynamical system perspective of double-diffusive convection” *Boston University Dynamical Systems seminar*, October 6, 2025
- I11. **C. Liu** (2025) “Double-diffusive convection from a dynamical systems perspective” *Massachusetts Institute of Technology Program in Atmospheres, Oceans, & Climate (PAOC) Colloquium*, September 15, 2025
- I10. **C. Liu** (2025) “Thermohaline convection from a dynamical systems perspective” *Woods Hole Oceanographic Institution*, July 29, 2025
- I9. **C. Liu** (2025) “Reduced-order modeling and analysis of fluid flows: from wall-bounded shear flows to convection” *Department of Mathematical Sciences, Worcester Polytechnic Institute*, March 6, 2025
- I8. **C. Liu** (2024) “Single-mode equations based reduced-order modeling of (double-diffusive) convection” *Geophysical Fluid Dynamics Program, Woods Hole Oceanographic Institution*, July 12, 2024
- I7. **C. Liu** (2024) “Reduced-order modeling and analysis of fluid flows: from wall-bounded shear flows to convection” *Department of Mechanical Science & Engineering, University of Illinois Urbana-Champaign*, January 25, 2024 (Virtual)
- I6. **C. Liu** (2023) “Structured input-output analysis of wall-bounded shear flows” *Pre-APSDFD23 Workshop: The intersection of experiments, machine learning, and dynamical systems approaches to turbulent/complex fluid flows in energy systems and the environment*, November 16-17, 2023, Durham, New Hampshire
- I5. **C. Liu** (2023) “Reduced-order modeling and analysis of fluid flows” *Department of Mechanical Engineering, University of Connecticut*, September 8, 2023, Storrs, Connecticut
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- Before joining UConn—————
- I4. **C. Liu** (2023) “Reduced-order modeling and analysis of fluid flows: from wall-bounded shear flows to convection” *Department of Mechanical Engineering, University of Connecticut*, February 22, 2023, Storrs, Connecticut

- I3. **C. Liu** (2022) “Structured input-output analysis of transitional wall-bounded shear flows” *Institute of Mechanics, Chinese Academy of Sciences*, August 3, 2022 (Online)
- I2. **C. Liu** (2022) “Structured input-output analysis of transitional wall-bounded flows” *Corrsin-Kovaszny Award talk in Center for Environmental & Applied Fluid Mechanics at Johns Hopkins University*, April 22, 2022, Baltimore, Maryland (**Corrsin-Kovaszny Outstanding Paper Award**)
- I1. **C. Liu**, D. F. Gayme (2021) “Structured input-output analysis of wall-parallel length scales in transitional plane Couette flow” *AIAA Aviation 2021 Forum*, August 2-6, 2021, Virtual Event

CONTRIBUTED ORAL PRESENTATIONS

___: research mentee

- O48. **C. Liu** “Structured input-output analysis of transitional wall-bounded shear flows” *20th U.S. National Congress on Theoretical and Applied Mechanics*, June 21-25, 2026, Pasadena, CA
- O47. **C. Liu** “Lyapunov stability analysis of time-varying shear flows” *Workshop in PDE and Applied Math in the Northeast Region 2026*, March 7, 2026, Storrs, CT
- O46. **C. Liu** “Exact Coherent Structures of Sheared Double-Diffusive Convection” *Workshop on Numerical and Theoretical Advances in Geophysical Fluid Dynamics and Nonlinear PDE Systems* February 7-8, 2026, College Station, TX
- O45. A. Fraser, A. van Kan, E. Knobloch, K. Julien, **C. Liu** “Helical flows spontaneously generated by salt fingers” (Invited) *American Geophysical Union (AGU) Fall Meeting 2025*, December 15-19, 2025, New Orleans, LA
- O44. A. Fraser, A. van Kan, E. Knobloch, K. Julien, **C. Liu** “Helical flows spontaneously generated by salt fingers” *78th Annual Meeting of the APS Division of Fluid Dynamics*, November 23-25, 2025, Houston, TX
- O43. **C. Liu**, Z. Wei, W. Zhao “Upper bounds of transient growth in accelerating and decelerating wall-driven flows using Lyapunov method” *78th Annual Meeting of the APS Division of Fluid Dynamics*, November 23-25, 2025, Houston, TX
- O42. D. V. Nguyen, **C. Liu** “Exact coherent structures of sheared double-diffusive convection” *78th Annual Meeting of the APS Division of Fluid Dynamics*, November 23-25, 2025, Houston, TX
- O41. J. George, **C. Liu** “Input-output analysis of separated flows over streamwise- wavy walls using volume penalty method” *78th Annual Meeting of the APS Division of Fluid Dynamics*, November 23-25, 2025, Houston, TX
- O40. Z. Wei, **C. Liu** “Nonlinear input-output analysis of transitional shear flows using small-signal finite-gain Lp stability” *78th Annual Meeting of the APS Division of Fluid Dynamics*, November 23-25, 2025, Houston, TX
- O39. E. Knobloch, Z. Li, **C. Liu**, A. van Kan (2025) “Traveling spatially localized convective structures in an inclined porous medium” *2nd European Fluid Dynamics Conference*, 26-29 August 2025, Dublin, Ireland

- O38. **C. Liu** (2025) “Single-Mode Equations of Convection with Large-Scale Damping” *SIAM Conference on Applications of Dynamical Systems (DS25)*, May 11-15, 2025, Denver, Colorado
- O37. **Z. Li, C. Liu, A. van Kan, E. Knobloch** (2025) “Traveling spatially localized convective structures in an inclined porous medium” *SIAM Conference on Applications of Dynamical Systems (DS25)*, May 11-15, 2025, Denver, Colorado
- O36. **C. Liu** (2025) “Structured input-output analysis of wall-bounded shear flows” *American Mathematical Society 2025 Spring Eastern Sectional Meeting*, April 5-6, 2025, Hartford, CT
- O35. **V. D. Nguyen, C. Liu** (2024) “Determining exact coherent structures of sheared double-diffusive convection ” *100+1 New England Complex Fluids*, December 6, 2024, Harvard University, MA (**Early Bird Award**)
- O34. **J. George, C. Liu** (2024) “Input-output analysis of transitional channel flow over large-scale wavy walls” *100+1 New England Complex Fluids*, December 6, 2024, Harvard University, MA
- O33. **Z. Li, C. Liu, A. van Kan, E. Knobloch** (2024) “Traveling spatially localized convective structures in an inclined porous medium” *100+1 New England Complex Fluids*, December 6, 2024, Harvard University, MA (**Early Bird Award**)
- O32. **J. George, C. Liu** (2024) “Input-output analysis of transitional channel flow over large-scale wavy walls” *77th Annual Meeting of the APS Division of Fluid Dynamics*, November 24-26, 2024, Salt Lake City, Utah
- O31. **A. Rath, C. Liu, D. F. Gayme** (2024) “Effect of wall suction on optimal perturbations in boundary layers” *77th Annual Meeting of the APS Division of Fluid Dynamics*, November 24-26, 2024, Salt Lake City, Utah
- O30. **Z. Li, C. Liu, A. van Kan, E. Knobloch** (2024) “Traveling spatially localized convective structures in an inclined porous medium” *77th Annual Meeting of the APS Division of Fluid Dynamics*, November 24-26, 2024, Salt Lake City, Utah
- O29. **C. Liu, E. Knobloch** (2024) “Single-mode solutions for convection and double-diffusive convection in porous media” *77th Annual Meeting of the APS Division of Fluid Dynamics*, November 24-26, 2024, Salt Lake City, Utah
- O28. **C. Liu** (2024) “Single-mode equations of salt-finger convection and fixed-flux homogeneous convection” *A tribute and celebration honoring the scientific legacy of Keith Julien*, November 23, 2024, Salt Lake City, Utah
- O27. **C. Liu** (2024) “Structured input-output analysis of wall-bounded shear flows” *Workshop on Coherent Structures for Turbulence Modeling*, November 20-21, 2024, Santa Fe, New Mexico
- O26. **C. Liu** (2024) “Structured input-output analysis of wall-bounded shear flows” *2024 SIAM New York-New Jersey-Pennsylvania Section Conference*, November 1-3, 2024, Rochester Institute of Technology, Rochester, New York
- O25. **J. George, C. Liu** (2024) “Input-output analysis of transitional channel flow over large-scale wavy walls” *2024 SIAM New York-New Jersey-Pennsylvania Section Conference*, November 1-3, 2024, Rochester Institute of Technology, Rochester, New York

- O24. **C. Liu** (2024) “Reduced-order modeling and analysis of fluid flows: from wall-bounded shear flows to convection” *New England Section of the American Physical Society Fall 2024 Meeting*, October 18-19, 2024, Boston, MA
- O23. **C. Liu**, **Y. Zaidi** (2024) “Quantum assisted hydrodynamic stability analysis” 2nd UConn Quantum Consortium, March 20, Storrs, Connecticut
- O22. **C. Liu** (2024) “Reduced-order modeling and analysis of fluid flows: from wall-bounded shear flows to convection” 98th New England Complex Fluids, March 22, Tufts University, Medford, Massachusetts
- O21. **C. Liu**, A. D. Clark (2024) “Error bounds of constant gain least-mean-squares algorithms” 58th Annual Conference on Information Sciences and Systems, March 13-15, Princeton, New Jersey
- O20. **C. Liu** (2023) “Reduced-order modeling and analysis of fluid flows: from wall-bounded shear flows to convection” Vortices, zombies and spots: A celebration of Philip Marcus’ 36 years at Berkeley and 72 years on Planet Earth, December 8-9, Berkeley, California
- O19. **C. Liu**, M. Sharma, K. Julien, E. Knobloch (2023) “Fixed-flux Rayleigh-Bénard convection in doubly periodic domains” *76th Annual Meeting of the APS Division of Fluid Dynamics*, November 19-21, 2023, Washington, DC
- O18. **L. Xu**, A. van Kan, **C. Liu**, E. Knobloch (2023) “Noise-induced transitions in anisotropic two-dimensional turbulence” *76th Annual Meeting of the APS Division of Fluid Dynamics*, November 19-21, 2023, Washington, DC
- O17. **A. Rath**, **C. Liu**, D. F. Gayme (2023) “Optimal perturbations in transitional Blasius boundary layers: A structured approach” *76th Annual Meeting of the APS Division of Fluid Dynamics*, November 19-21, 2023, Washington, DC
- O16. **C. Liu** (2023) “Reduced-order modeling and analysis of fluid flows” Cambridge-Oxford Joint Fluid Mechanics Symposium, October 29, 2023, Cambridge, UK (Virtual lightning talk)
- O15. **C. Liu** A. D. Clark (2023) “Semi-analytical solutions of shallow water waves with idealized bottom topographies” SIAM New York-New Jersey-Pennsylvania Section, October 21-22, 2023, Newark, New Jersey
- Before joining UConn—————
- O14. **C. Liu**, **Y. Shuai**, **A. Rath**, D. F. Gayme (2023) “A structured input-output approach to characterizing optimal perturbations in wall-bounded shear flows” *American Control Conference 2023*, May 31-June 2, San Diego, California
- O13. **C. Liu** (2023) “Reduced-order modeling and analysis of fluid flows: from wall-bounded shear flows to salt-finger convection” *Climate Chedann Group*, February 25, 2023 (Online)
- O12. **C. Liu**, K. Julien, E. Knobloch (2022) “Staircase solutions and stability in vertically confined salt-finger convection” *75th Annual Meeting of the APS Division of Fluid Dynamics*, November 20-22, 2022, Indianapolis, Indiana
- O11. M. Sharma, **C. Liu**, K. Julien, E. Knobloch (2022) “Modeling salt-finger convection in the oceanic parameter regimes” *75th Annual Meeting of the APS Division of Fluid Dynamics*, November 20-22, 2022, Indianapolis, Indiana

- O10. Y. Shuai, **C. Liu**, D. F. Gayme (2022) “Structured input-output analysis of oblique laminar-turbulent flow patterns in transitional plane Couette-Poiseuille flow” *75th Annual Meeting of the APS Division of Fluid Dynamics*, November 20-22, 2022, Indianapolis, Indiana
- O9. A. Rath, **C. Liu**, D. F. Gayme (2022) “Structured input-output analysis of transitional Blasius boundary layer flows using a descriptor state space model” *75th Annual Meeting of the APS Division of Fluid Dynamics*, November 20-22, 2022, Indianapolis, Indiana
- O8. Y. Shuai, **C. Liu**, D. F. Gayme (2022) “Structured input-output analysis of oblique turbulent bands in transitional plane Couette-Poiseuille flow” *Twelfth International Symposium on Turbulence and Shear Flow Phenomena (TSFP12)*, July 19-22, 2022, Osaka, Japan (Online)
- O7. **C. Liu**, E. Knobloch, (2022) “Staircase solutions and stability in bounded salt-finger convection” *Euromech Colloquium 619 Oberbeck-Boussinesq Hypothesis and Beyond in stratified turbulence*, July 4-8, 2022, Wien, Austria (Hybrid)
- O6. **C. Liu**, C. P. Caulfield, D. F. Gayme (2021) “Structured input-output analysis of stably stratified plane Couette flow” *74th Annual Meeting of the APS Division of Fluid Dynamics*, November 21-23, 2021, Phoenix, Arizona
- O5. **C. Liu**, I. Gluzman, M. Lozier, S. Midya, S. Gordeyev, F. O. Thomas and D. F. Gayme (2021) “Spatial input-output analysis of large-scale structures in actuated turbulent boundary layers” *AIAA Aviation 2021 Forum*, August 2-6, 2021, Virtual Event
- O4. **C. Liu**, D. F. Gayme (2020) “A linear matrix inequality based approach for efficient approximation of permissible perturbation amplitude in wall-bounded shear flows at transitional Reynolds numbers” *73rd Annual Meeting of the APS Division of Fluid Dynamics*, November 22-24, 2020, Chicago, Illinois (Virtual)
- O3. **C. Liu**, D. F. Gayme (2019) “Convective velocities of vorticity fluctuations in turbulent channel flows: an input-output approach”, *11th International Symposium on Turbulence and Shear Flow Phenomena (TSFP11)*, July 30-August 2, 2019, Southampton, UK
- O2. **C. Liu**, D. F. Gayme (2018) “Input-output based analysis of convective velocity in turbulent channels”, *71st Annual Meeting of the APS Division of Fluid Dynamics*, November 18–20, 2018; Atlanta, Georgia
- O1. **C. Liu**, S. Fu, M. Zhang, H. Ren (2017) “Time varying hydrodynamics identification of a flexible riser under multi-frequency vortex-induced vibrations” *36th International Conference on Ocean, Offshore & Arctic Engineering*, June 25-30, 2017, Trondheim, Norway

CONTRIBUTED POSTERS

___: research mentee

- P23. N. Chasmawala, **C. Liu** (2025) “Using Data Assimilation to Predict Chaotic or Turbulent Model Behavior” Avon High School’s ACHIEVE Internship Program Showcase, September 16, 2025, Avon, CT
- P22. S. Kant, **C. Liu** (2025) “Solving Inverse Navier-Stokes Equations with Physics-Informed Neural Networks & Least Squares Method” Avon High School’s ACHIEVE Internship Program Showcase, September 16, 2025, Avon, CT

- P21. Y. Zaidi, K. Kochnev, **C. Liu** (2024) “Quantum-assisted hydrodynamic stability analysis” NASA CT Space Grant Consortium Grants Expo, November 8, Windsor Locks, CT
- P20. J. Hu, **C. Liu** (2024) “Solving compressible plane Couette flow with numerical methods and physics-informed neural networks” Avon High School’s ACHIEVE Internship Program Showcase, September 17, 2024, Avon, CT
- P19. B. Machlus, **C. Liu** (2024) “Turbulent Channel Flow” Avon High School’s ACHIEVE Internship Program Showcase, September 17, 2024, Avon, CT
- P18. Y. Zaidi, **C. Liu** (2024) “Quantum-assisted hydrodynamic stability analysis” UConn Summer Research Day, UConn Health, July 25, CT
- P17. J. George, **C. Liu** (2024) “Reduced-order modeling of fluid-structure interactions” 2024 Long Island Sound Research Conference, May 15, Port Jefferson, NY
- P16. **C. Liu**, R. Muccino (2024) “Settling enhanced mixing in stably stratified flows” 2024 Long Island Sound Research Conference, May 15, Port Jefferson, NY
- P15. R. Muccino, **C. Liu** (2024) “Settling-driven layering in double-diffusive convection” 2024 Long Island Sound Research Conference, May 15, Port Jefferson, NY
- P14. Z. Li, A. van Kan, **C. Liu**, E. Knobloch (2024) “Traveling localized convective structures in an inclined porous layer” University of Washington Undergraduate Research Symposium, May 17, 2024, Seattle, WA
- P13. **C. Liu** (2024) “Reduced-order modeling and analysis of fluid flows” Connecticut Institute for Resilience & Climate Adaptation (CIRCA) Faculty & Staff Research Symposium on Climate Change: Challenges and Innovations, January 12, 2024, Storrs, CT
- P12. T. Tsubota, **C. Liu**, B. Foster, E. Knobloch (2024) “Bifurcation delay and front propagation in the real Ginzburg-Landau equation on a time-dependent domain” Dynamics Days US, January 8–10, 2024, Davis, CA
- P11. L. Xu, A. van Kan, **C. Liu**, E. Knobloch (2024) “Noise-Induced Transitions in Anisotropic Two-Dimensional Turbulence” Dynamics Days US, January 8-10, 2024, Davis, CA
- P10. **C. Liu** (2023) “Reduced-order modeling and analysis of fluid flows” UNH Pre-APS Fluid Dynamics Workshop, November 16-17, 2023, Durham, NH
- P9. **C. Liu** (2023) “Reduced order modeling and analysis of fluid flows” The symposium on ‘Flow, Turbulence, and Wind Energy’, October 17-20, 2023, San Juan, Puerto Rico
- Before joining UConn—————
- P8. L. Xu, A. van Kan, **C. Liu**, E. Knobloch (2023) “Noise-induced transitions in anisotropic two-dimensional turbulence” *The 2023 Π^2 Summer Scholar Symposium*, August 22 2023, Berkeley, CA
- P7. T. Tsubota, **C. Liu**, B. Foster, E. Knobloch (2023) “Dynamics of the real Ginzburg-Landau equation on a time-dependent domain” *Poster session of Berkeley Physics Undergraduate Research Scholars Program*, April 14, 2023, Berkeley, California
- P6. L. Xu, A. van Kan, **C. Liu**, E. Knobloch (2023) “Rare Transitions in Anisotropic 2D Turbulence” *Poster session of Berkeley Physics Undergraduate Research Scholars Program*, April 14, 2023, Berkeley, California

- P5. **C. Liu**, K. Julien, E. Knobloch (2023) “Staircase solutions and stability in vertically confined salt-finger convection” *Dynamics Days 2023*, January 9–11, 2023, Hartford, Connecticut (Online)
- P4. **T. Tsubota**, **C. Liu**, B. Foster, E. Knobloch (2022) “Dynamics in the real Ginzburg-Landau equation on a time-dependent domain” *The 2022 π^2 Summer Scholar Symposium*, August 22, 2022, Berkeley, California
- P3. **C. Liu**, K. Julien, E. Knobloch (2022) “Staircase solutions and stability in bounded salt-finger convection” *Boulder School for Condensed Matter and Materials Physics 2022: Hydrodynamics Across Scales*, July 4-29, 2022, Boulder, Colorado
- P2. **C. Liu**, E. Knobloch (2022) “Single mode solutions to convection in a porous medium”, *Dynamics Days 2022*, January 7-8, 2022 Atlanta, GA (Online)
- P1. **C. Liu**, D. F. Gayme (2021) “Structured input-output analysis of dominant flow structures in transitional plane Couette flow” *IPAM Workshop Transport and Mixing in Complex and Turbulent Flows*, January 11-14, 2021, Los Angeles, California (Virtual)

RESEARCH MENTEE

Ph.D. students

- Van Duc Nguyen (Early Bird Awardee of 101 New England Complex Fluids, 2025 DFD Travel Award) 08/2024-now
- Jino George 01/2024-now

Undergraduate students

- Brooklyn Zimmerman 03/2026-now
- Alexander Ciltea 02/2026-now
- Kendra Baker (Honors Research Spring 2026) 02/2026-now
- Jai Gandhi 01/2026-now
- Zheng Cao (Independent Research, Spring 2026) Next Position: Master student at University of Southern California 05/2025-now
- Zhiwei Liang (Honors Research, Fall 2025, Work-Study Research Assistant Program, Spring 2026) 08/2025-now
 - Awarded UConn Summer Undergraduate Research Fund (SURF) Awards \$5312
- Zhengyang Wei (Honors Research, Fall 2025, Honors Course Conversion, Fall 2024, Spring 2025) Next Position: PhD student at The Hong Kong University of Science and Technology (HKUST) 04/2024-now
 - Awarded 2025 DFD Travel Award and UConn OUR Conference Presentation Award
 - Awarded UConn Summer Undergraduate Research Fund (SURF) Awards \$5050
 - Selected by University Scholar Program (Featured in [UConn Today](#))
- Charley Ma 09/2024-12/2024
- Enzo Mangiafico 02/2024-12/2024
- Reis Muccino (Work-Study Research Assistant Program, Fall 2025-Fall 2026) 02/2024-12/2024
- Yanlong Che 01/2024-12/2024
- Yusuf Zaidi 01/2024-09/2024

- Awarded NASA Connecticut Space Grant Consortium Internship \$7000
- Kalin Kochnev (Honors Research, Spring 2025) 09/2023-now
 - UConn Summer Undergraduate Research Fund (SURF) Awards \$4000
 - Awarded NASA Connecticut Space Grant Consortium Undergraduate Scholarship \$3000

Senior Design

- ME06 (Sponsor: American Society of Naval Engineers) 09/2025-05/2026
- ME60 (Sponsor: Prof. Chang Liu) 09/2025-05/2026
- ME04 (Sponsor: American Society of Naval Engineers) 09/2024-05/2025
- ME15 (Sponsor: Collins Aerospace) 09/2023-05/2024

Visiting Students/Scholars

- Zekai Song (Undergraduate from Zhejiang University/University of Illinois Urbana-Champaign) Next Position: PhD student at Northwestern University 06/2025-08/2025
- Leran Hu (Undergraduate from Harvey Mudd College) 06/2025-08/2025
- Weichen Zhao (Undergraduate from Wuhan University of Technology) Next Position: PhD student at Binghamton University 06/2024-08/2024
- Lichuan Xu (Undergraduate from University of California, Berkeley) Next Position: PhD student at University of Chicago 04/2024-07/2024

High School Students

- Aarav Chourey (Avon High School's ACHIEVE Internship Program) 06/2026-08/2026
- Rohan Ganesh (Avon High School's ACHIEVE Internship Program) 02/2026-05/2026
- Saujas Kant (Avon High School's ACHIEVE Internship Program) 07/2025-08/2025
- Nabeel Chasmawala (Avon High School's ACHIEVE Internship Program) 07/2025-08/2025
- Arden Lu (Northfield Mount Hermon School) 06/2025-08/2025
- Aditya Thakar (Avon High School's ACHIEVE Internship Program) (Next position: Undergraduate at University of Connecticut) 10/2024-now
- Benjamin Machlus (Avon High School's ACHIEVE Internship Program) (Next position: Rochester Institute of Technology) 06/2024-08/2024
- Jingrui (Ray) Hu (Avon High School's ACHIEVE Internship Program, Selected as Valedictorian) (Next position: Undergraduate at University of California, Los Angeles, selected Valedictorian) 06/2024-08/2024

Geophysical Fluid Dynamics Fellows

- Lin Yao (University of Chicago) Co-advised with Wanying Kang, Glenn R. Flierl, Adrian van Kan, and Keaton Burns 2025
- Marion Cousse (École polytechnique) Co-advised with Pascale Garaud and Colm-cille Caulfield 2025

Research mentee before UConn

- Zhiwei (Dave) Li (Co-advised with Adrian van Kan and Edgar Knobloch)
 - Next position: PhD student at the University of Chicago
 - Awarded APS DFD travel grant \$500

- Awarded SIAM student travel award \$835
- Lichuan Xu (Co-advised with Adrian van Kan and Edgar Knobloch)
 - Next position: Ph.D. student at the University of Chicago
 - Awarded Pi²(\$6600) and BPURS(\$750)
 - Berkeley Physics Undergraduate Student Travel Scholarship
- Troy Tsubota (Co-advised with Benjamin Foster and Edgar Knobloch)
 - Next position: PhD student at Harvard University
 - UC Berkeley Physics Departmental Citation (top graduating senior)
 - Awarded Pi²(\$6500) and BPURS(\$750)*3
- Aishwarya Rath (Co-advised with Dennice F. Gayme)
 - Next position: R&D Thermo-Fluids Associate Engineer at Hitachi Energy
- Yu Shuai (Co-advised with Dennice F. Gayme)
 - Next position: Ph.D. student at Princeton University

Pi²: Physics Innovators Initiative Summer Scholars; BPURS: Berkeley Physics Undergraduate Research Scholars

TEACHING

Instructor

University of Connecticut, Storrs, CT

01/2024 - now

- ME 3130 Advanced Engineering Mathematics Spring 2026
- ME 5507 Engineering Analysis I Fall 2025
- ME 3253 Linear Systems Theory Spring 2025
- ME 5895-001/ME 3295-001/ECE 6095-004 Nonlinear Systems Fall 2024
- CE2120 Applied Mechanics II Spring 2024

Teaching assistant/Instructor

Johns Hopkins University, Baltimore, MD

9/2018 - 5/2021

- EN.530.334 SP21 Heat Transfer
- EN.500.111 FA20 Simple Mathematics Revealing Big Physics (HEART instructor)
- EN.530.343 SP20 Design and Analysis of Dynamical Systems
- EN.530.424/EN.530.624 FA19 Dynamics of Robots and Spacecraft
- EN.530.470 SP19 Space Vehicle Dynamics and Control
- EN.530.761 FA18 Mathematical Methods of Engineering I

ACADEMIC SERVICE

Ph.D. Qualification Committee

- Khoa Nguyen TBD
- Lily French TBD
- Eva Crowley TBD
- Mohamed Elgamal Sr. 01/2026
- Zhiling Chen 08/2024

· Yang Kang Chua 09/2024

Ph.D. Thesis Proposal Committee

· Yang Kang Chua 05/2026
· Bhushan Patil 8/2025
· Jonas Saggese Banhos 6/2025
· Aishwarya Rath (Johns Hopkins University) 01/2025

Ph.D. Thesis Defense Committee

· Jonas Saggese Banhos 11/2025
· Aishwarya Rath (Johns Hopkins University) 06/2025

Master Thesis Defense Committee

· Ryan Bisi 04/2026

University of Connecticut

UConn Asian/Asian-American Faculty & Staff Association (A3FSA) Executive Committee Members 01/2025-12/2025

Jorgensen fellowship review Committee 02/09/2024

Graduate Admission Committee 2023-now

University of California, Berkeley

Selection Committee of Physics Innovators Initiative (Pi²) 2023

Proposal Reviewer/Panel: National Science Foundation ENGR/CBET Program (2023, 2025), Army Research Office, Natural Sciences and Engineering Research Council of Canada (NSERC), UConn Research Excellence Program

Session Organizer: SIAM Conference on Applications of Dynamical Systems (DS25) Minisymposium: Geophysical Fluid Dynamics

Professional Committee: NSF Advanced Cyberinfrastructure Coordination Ecosystem: Services & Support (ACCESS) Researcher Advisory Committee

Session Chair: 2026 American Control Conference, 78th Annual Meeting of the APS Division of Fluid Dynamics 2025, APS New England Section (NES) Annual Meeting 2025, 77th Annual Meeting of the APS Division of Fluid Dynamics 2024, SIAM NNP annual meeting 2023

Journal Reviewer: (#): number of papers reviewed where revision is counted as a new paper.

Journal of Fluid Mechanics (20), Physics of Fluids (15), Computers and Fluids (3), Marine Structures (31), Ocean Engineering (9), Journal of Offshore Mechanics and Arctic Engineering (15), European Journal of Mechanics/B Fluids (2), Proceedings of the Royal Society A (1) IEEE Control Systems Letters (2), Physica Scripta (2), Chaos, Solitons and Fractals (3), Applied Economics, Measurement Science and Technology (2), Communication Engineering (1), GEM - International Journal on Geomathematics (1), Journal of Physics A: Mathematical and Theoretical (2), CFD Letters (1), Journal of Heat and Mass Transfer Research (3), Applied Mathematics and Mechanics (2), Mathematical Methods in the Applied Sciences (1)

Book Reviewer: Cambridge University Press (1)

Conference Program Committee: The Thirty-Eighth Annual Conference on Innovative Applications of Artificial Intelligence (IAAI-26): Review 7 conference papers and participate in committee meeting.

Conference Reviewer: (#): number of papers reviewed where revision is counted as a new paper. IEEE Conference on Decision and Control (1), American Control Conference (2), International Conference on Ocean, Offshore & Arctic Engineering (11)

OUTREACH ACTIVITIES

- O15. Guest Presentation “How to build an electric boat?” UConn Boat Camp for 5-6th grade students 08/08/2025, 08/13/2025
- O14. Career Champion, UConn Center for Career Readiness and Life Skills 05/2025-noew
- O13. Mentor of Network for Enriched Mentorship (NEM) program. Mentee: Zhengyuan Ling 11/2024-5/2025
- O12. Judger of Senior Design Demo Day 04/26/2024, 05/02/2025
- O11. Judger of Graduate Research Competition 2024 04/22/2024
- O10. Faculty representative of Graduate Visitation Networking Event 02/23/2024
- O9. Judger of COE 10th Annual Poster Competition 02/23/2024
- O8. CAPS/McNair Faculty Mentor 01/2024 - now
- O7. UConn Career Champion Program 11/2023 - now
- O6. Faculty Mentor of UConn Connects Program (All mentees are first generation); Mentee: Jieming Xiao (Spring 2024), Nicolas Camacho (Fall 2024, returned to good standing), Boyu Zhang (Spring 2025), Shuyi Liu (Fall 2025, returned to good standing)
- O5. APS-DFD peer mentoring program 2023, 2024
- O4. Panel on “Grad Info Session for Undergraduate Students” 11/13/2023
- O3. ENGR 1000 Out-of-Class Presentation: “Fluid Dynamics” 10/17/2025
- O2. ENGR 1000 Out-of-Class Presentation: “Reduced-order modeling and analysis of fluid flows” 11/8/2023
- O1. Roundtable discussion “Research Connection: Facets of Research” 10/12/2023

PROFESSIONAL DEVELOPMENT

- Inclusive Excellence Program for Faculty and Staff: Justice, Equity, and Transformation (JET), Vergnano Institute for Impact 09/2024-05/2025
- Consultation with Center for Excellence in Teaching and Learning 01/13/2025, 06/11/2024, 01/12/2024
- Certificate for: Quantum Computing Fundamental, Professional Certificate Program, MIT xPRO 09/25/2023-12/04/2023

FIRST AUTHOR JOURNAL ARTICLE NUMBERS

Journal of Fluid Mechanics (5), Journal of Fluids and Structures (2), Physical Review E (1),
AIAA Journal (1), Geophysical & Astrophysical Fluid Dynamics (2), Fluids (1), Physics Letters
A (1)

Updated on April 13, 2026