Hibiki Kato (加藤響)

USA / Japan • University of Maryland, College Park
hibiki@umd.edu

PROFILE

Interests: Dynamical systems; Chaos; Numerical simulation; Fluid dynamics; Synchronization; Typhoon; Machine Learning; AI; Reservoir Computing.
Hobbies: cycling

SKILLS

Programming: Julia, Python, C++, R.
License: Unmanned Aircraft Remote Pilot (CLASS II), Japan.

EDUCATION

University of Maryland, College Park —College Park, MD, USA — Sep 2025 – Present
Ph.D. Student, AMSC Program

Hitotsubashi University —Kunitachi, Tokyo, Japan — Apr 2025 – Present
M.S. student, Researcher Training Program in Business Administration

Hitotsubashi University —Kunitachi, Tokyo, Japan — Apr 2021 – Mar 2025
B.S. in Commerce and Management

EXPERIENCE

Math department, University of Maryland, College Park —Maryland, USA
Research Assistant — Sep 2025 – May 2026

Research and Development Center for Higher Education, Hitotsubashi Univ. —Tokyo, Japan
Teaching Assistant — Apr 2025 – Aug 2025

Research and Development Center for Higher Education, Hitotsubashi Univ. —Tokyo, Japan
Teaching Assistant — Sep 2024 – Mar 2025

Graduate School of Business Administration, Hitotsubashi Univ. —Tokyo, Japan
Teaching Assistant — Apr 2024 – Mar 2025

Graduate School of Business Administration, Hitotsubashi Univ. —Tokyo, Japan
Research Assistant — Jan 2022 – Aug 2025

AWARDS

Poster Presentation Award at Dynamics Days US 2026 — Jan 2026
Heiwa Nakajima Foundation Scholarship — Sep 2025 – Present

PUBLICATIONS

JOURNALS

[2] H. Kato, M. U. Kobayashi, Y. Saiki, J. A. Yorke, "Laminar chaotic saddle within a turbulent attractor," *Phys. Rev. E* 110, L052202, Sep 2024.

[1] H. Kato, M. U. Kobayashi, Y. Saiki, J. A. Yorke, "A laminar chaotic saddle within a turbulent attractor," *arXiv*, Sep 2024.

TECHNICAL REPORTS

[2] H. Kato, "リアプノフ指数で測れないカオス力学系の不安定性 (Unstable Behaviors in Chaotic Systems Beyond the Scope of Lyapunov Exponents)," *Hokkaido Univ. Tech. Report in Math.*, 237–246, May 2025.

[1] H. Kato, "流体乱流モデルにみられる位相同期現象とカオティックサドル (Phase synchronization in Fluid Dynamics and Chaotic saddle)," *Hokkaido Univ. Tech. Report in Math.*, 475–484, Mar 2024.

PRESENTATIONS

[7] A Numerical Analysis of Sensitivity in the Hénon Attractor —Oral, RIMS 共同研究 2025「力学系の理論と応用」, Kyoto, Japan, Jun 2025.

[6] リアプノフ指数で測れないカオス力学系の不安定性 (Unstable Behaviors in Chaotic Systems Beyond the Scope of Lyapunov Exponents) —Oral, The 21st Mathematics Conference for Young Researchers, Sapporo, Hokkaido, Japan, Mar 2025.

[5] Laminar chaotic saddle within a turbulent attractor —Oral, Winter Annual Conference on Dynamical Systems 2024, Ito, Fukuoka, Japan, Jan 2025.

[4] Laminar chaotic saddle within a turbulent attractor —Oral, Joint Research Meeting on Applied Mathematics 2024, Seta, Shiga, Japan, Dec 2024.

[3] A non-attracting chaotic subset within a turbulent attractor ―Oral, Tateyama Dynamics Workshop 2024, Tateyama, Chiba, Japan, Mar 2024.

[2] Phase synchronization in Fluid Dynamics and Chaotic saddle ―Oral, The 20th Mathematics Conference for Young Researchers, Sapporo, Hokkaido, Japan, Mar 2024.

[1] Chaotic saddle and phase synchronization in GOY shell model of fluid turbulence ―Poster, Dynamics Days Kagurazaka 2023, Kagurazaka, Tokyo, Japan, Dec 2023.

[*CV compiled on 2026-04-08*]