Ryosuke Yoneda, Ph.D.

y @yonesuke1729

https://yonesuke.github.io/

Employment History

2023 – · · · Nomura Securities, Data Science Department.

Education

2020 – 2023 Ph.D. in Informatics, Kyoto University.

Thesis title: Theoretical and Experimental Research on Coupled Phase-Oscillator Models.

2018 – 2020 M.Sc. in Informatics, Kyoto University.

Thesis title: Critical exponents in coupled phase-oscillator models on small-world networks.

2014 – 2018 **B.Sc. in Engineering, Kyoto University**.

Thesis title: Classification of bifurcation diagrams in coupled phase-oscillator models with asymmetric natural frequency distributions.

Research Publications

Journal Articles

- R. Yoneda and K. Harada, "Neural network approach to scaling analysis of critical phenomena," *Physical Review E*, vol. 107, no. 4, p. 044128, 2023. eprint: arXiv:2209.01777. URL: https://journals.aps.org/pre/abstract/10.1103/PhysRevE.107.044128.
- R. Yoneda, T. Tatsukawa, and J.-n. Teramae, "The lower bound of the network connectivity guaranteeing in-phase synchronization," *Chaos: An Interdisciplinary Journal of Nonlinear Science*, vol. 31, no. 6, p. 063 124, 2021. URL: https://aip.scitation.org/doi/abs/10.1063/5.0054271.
- R. Yoneda, K. Harada, and Y. Y. Yamaguchi, "Critical exponents in coupled phase-oscillator models on small-world networks," *Physical Review E*, vol. 102, no. 6, p. 062 212, 2020. URL: https://journals.aps.org/pre/abstract/10.1103/PhysRevE.102.062212.
- R. Yoneda and Y. Y. Yamaguchi, "Classification of bifurcation diagrams in coupled phase-oscillator models with asymmetric natural frequency distributions," *Journal of Statistical Mechanics: Theory and Experiment*, vol. 2020, no. 3, p. 033 403, 2020. URL: https://iopscience.iop.org/article/10.1088/1742-5468/ab6f5f/meta.
- Y. Terada, K. Ito, R. Yoneda, T. Aoyagi, and Y. Y. Yamaguchi, "A role of asymmetry in linear response of globally coupled oscillator systems," 2018. eprint: arXiv:1802.08383. URL: https://arxiv.org/abs/1802.08383.

Skills

Languages Fluent in Japanese, conversational in English (TOEIC score 945, TOEFL score 93)

Coding Python, C/C++, Julia, LaTeX, ...

Misc. Academic research, teaching, training, Large typesetting and publishing.

Experience

Teaching

2020 – 2023 Lecturer in Kyoto Junior College of Foreign Languages, Practical Mathematics Skills.

Research Assistant

- Assist in the development of methods for statistically estimating mathematical models from data on spatio-temporal rhythm phenomena.
 - Assist in research on orbital design of space probes.
- Assist in the development of statistical methods for building mathematical models from observed data of rhythmic phenomena.

Grants

- 2022 2024 **Research Fellowship for Young Scientists**, Japan Society for the Promotion of Science.
- 2020 2021 **Iwadare Scholarship**, Iwadare Scholarship Foundation.

Internships

- Nomura Securities, Nomura passport.
 - **P&G Japan Ltd.**, Summer Internship.
- 2018 2020 **DATAGRID Inc**, Internship.
 - 2018 Mercari Inc, Professional Internship.