

Akari Matsuki

Jan. 8, 2025

The Abdus Salam International Centre for Theoretical Physics (ICTP), Italy

amatsuki@ictp.it

EDUCATION

- 2018 Mar B.S. in Engineering,
Department of Mathematical Engineering and Information Physics,
The University of Tokyo.
(Supervisor: Professor Gouhei Tanaka)
- 2020 Mar M.S. in Information Science and Technology,
Department of Mathematical Informatics, The University of Tokyo.
(Supervisor: Professor Gouhei Tanaka)
- 2023 Mar Ph.D. in Information Science and Technology,
Department of Mathematical Informatics, The University of Tokyo.
(Supervisor: Professor Hiroshi Kori)

WORK EXPERIENCE

- 2024 Dec – Now Postdoctoral fellow at Quantitative Life Sciences,
The Abdus Salam International Centre for Theoretical Physics (ICTP)
- 2023 Apr – 2024 Nov Postdoctoral fellow at Laboratory of Mathematical Biology,
Faculty of Advanced Life Science, Hokkaido University (Japan)
- 2021 Apr – 2023 Mar Research Fellowship for Young Scientists,
Japan Society for the Promotion of Science
- 2021 Jul – 2021 Mar Research Assistant of PRESTO, Japan Science and Technology Agency

TEACHING EXPERIENCE

- 2021 Jul Complete “UTokyo Future Faculty Program”,
for acquiring skills and knowledge related to teaching at university.
- 2020 Jun Teaching assistant, Exercises in Mathematical Information Engineering 2A,
Fac. of Eng., The University of Tokyo.
- 2020 Apr – Jul Teaching assistant, Biological Information Theory,
Grad. Sch. of Info. Sci. and Tech., The Univ. of Tokyo.

PUBLICATION

- **Akari Matsuki**, Hiroshi Kori, and Ryota Kobayashi. “Network inference from oscillatory signals based on circle map”, (2024) Preprint
<https://arxiv.org/abs/2407.07445>
- Kimura, Ikuo, et al. (**I am the 20th author**) "Sucrose-preferring gut microbes prevent host obesity by producing exopolysaccharides." (2024), Preprint
<https://www.researchsquare.com/article/rs-3889905/v1>
- **Akari Matsuki**, Hiroshi Kori, and Ryota Kobayashi. "An extended Hilbert transform method for reconstructing the phase from an oscillatory signal", *Sci. Rep.* **13**, 3535 (2023).
<https://doi.org/10.1038/s41598-023-30405-5>
- **Akari Matsuki**, and Gouhei Tanaka. "Intervention threshold for epidemic control in susceptible-infected-recovered metapopulation models." *Physical Review E* 100.2 (2019): 022302.
<https://journals.aps.org/pre/abstract/10.1103/PhysRevE.100.022302>

PRESENTATIONS

- **Akari Matsuki**, Ryota Kobayashi, and Hiroshi Kori. “Network inference from oscillatory signals based on circle map”, Dynamics Days Europe, Bremen, July 2024 (poster) [**Best Poster Award**]
- **Akari Matsuki** and Namiko Mitarai, "Population dynamics analysis of cross-feeding bacteria and phage for establishment of phage therapy", Dynamics Days Europe 2023, September 2023 (oral)
- **Akari Matsuki**, Hiroshi Kori, and Ryota Kobayashi. "An extended Hilbert transform method for phase reconstruction from an oscillatory signal", STATPHYS28, Aug. 2023 (oral)
- **Akari Matsuki**. "Analysis of intervention threshold for epidemic control using metapopulation models", The Conferences of the Middle European Cooperation in Statistical Physics (MECO45), (online) Sep. 2020. (poster)
- **Akari Matsuki** and Gouhei Tanaka. “Role of high-degree nodes in the metastability of a resting state network model”, The 2019 International Symposium on Nonlinear Theory and Its Applications (NOLTA2019), (Kuala Lumpur, Malaysia) Dec. 2019. (oral)

GRANTS

2024 Apr – 2024 Nov	Grant in Aid for Young Scientists (B), JSPS KAKENHI, Japan
2023 Oct – 2024 Nov	Grant-in-Aid for Research Activity Start-up, JSPS KAKENHI, Japan
2021 Apr – 2023 Mar	Grant-in-Aid for JSPS Fellows, JSPS KAKENHI, Japan

AWARDS

- The paper "An extended Hilbert transform method for reconstructing the phase from an oscillatory signal" is one of Top 50 downloaded Engineering paper published in Scientific Reports 2023
- Dynamics Days Europe 2024 AIP poster awards