
Personal details

Name Yoshihiko NISHIKAWA
Birth 11 May 1990
Position Assistant Professor at Department of Physics, Kitasato University

Education

2015–2018 Ph. D.
Graduate School of Arts and Sciences, The University of Tokyo
Supervisor: Koji Hukushima
2013–2015 M. A.
Graduate School of Arts and Sciences, The University of Tokyo
Supervisor: Koji Hukushima
2009–2013 B. A.
Department of Basic Science, The University of Tokyo

Research Experience

2023– Department of Physics, Kitasato University
Assistant Professor
2023 Laboratoire de Physique, École Normale Supérieure de Paris
CNRS Invited Researcher in Group of Dr. Werner Krauth
2021–2023 Graduate School of Information Sciences, Tohoku University
Project Assistant Professor
2019–2021 Laboratoire Charles Coulomb (L2C), Université de Montpellier, CNRS
Postdoctoral Researcher in Group of Dr. Ludovic Berthier
2018–2019 Laboratoire de Physique Statistique, École Normale Supérieure de Paris
Visiting Researcher in Group of Dr. Werner Krauth
2015–2017 National Institute for Materials Science
Junior Researcher

Fellowships and grants

2022–2027 JSPS, Grant-in-Aid for Early-Career Scientists (Grant No. 22K13968)
2017–2019 JSPS, Grant-in-Aid for JSPS Fellows (Grant No. 17J10496)
2018–2019 JSPS Research Fellowship for Young Scientists (PD)
2017–2018 JSPS Research Fellowship for Young Scientists (DC2)

Awards

2018 Special Research Award for Doctoral Thesis
Graduate School of Arts and Sciences, the University of Tokyo
2022 Poster award in the 10th Japanese Soft Matter workshop
“The liquid–hexatic transition for soft disks with inverse-power-law and truncated Lennard-Jones interactions”
2024 Young Scientist Award of the Physical Society of Japan (Division 11)

Publications

1. [Y. Nishikawa](#), M. Michel, W. Krauth, and K. Hukushima,
“Event-chain algorithm for the Heisenberg model: Evidence for $z \simeq 1$ dynamic scaling”,
Physical Review E **92**, 063306 (2015)

2. [Y. Nishikawa](#) and [K. Hukushima](#),
"Phase transitions and ordering structures in a model of chiral helimagnet in three dimensions",
 Physical Review B **94**, 064428 (2016)
3. [Y. Nishikawa](#) and [K. Hukushima](#),
"Event-chain Monte Carlo algorithm for continuous spin systems and its application",
 Journal of Physics: Conference Series **750**, 012014 (2016)
4. [Y. Nishikawa](#), [K. Hukushima](#), and [W. Krauth](#),
"Solid-liquid transitions of skyrmions in two-dimension chiral magnet",
 Physical Review B **99**, 064435 (2019)
5. [Y. Nishikawa](#) and [K. Hukushima](#),
"Lattice Glass Model in Three Spatial Dimensions",
 Physical Review Letters **125**, 065501 (2020)
6. [Y. Nishikawa](#), [A. Ikeda](#), and [L. Berthier](#),
"Relaxation Dynamics of Non-Brownian Spheres Below Jamming",
 Journal of Statistical Physics **182**, 37 (2021)
7. [Y. Nishikawa](#), [J. Takahashi](#), and [T. Takahashi](#)
"Stationary Bootstrap: A Refined Error Estimation for Equilibrium Time Series",
 arXiv:2112.11837 (2021)
8. [Y. Nishikawa](#), [M. Ozawa](#), [A. Ikeda](#), [P. Chaudhuri](#), and [L. Berthier](#),
"Relaxation Dynamics in the Energy Landscape of Glass-Forming Liquids",
 Physical Review X **12**, 021001 (2022)
9. [Y. Nishikawa](#), [A. Ikeda](#), and [L. Berthier](#)
"Collective dynamics in a glass-former with Mori-Kurchan interactions",
 Journal of Chemical Physics **156**, 244503 (2022)
10. [B. Li](#), [Y. Nishikawa](#), [P. Höllmer](#), [L. Carillo](#), [A. C. Maggs](#), and [W. Krauth](#)
"Hard-disk pressure computations — a historic perspective" ^{EP},
 Journal of Chemical Physics **157**, 234111 (2022)
11. [Y. Nishikawa](#), [W. Krauth](#), and [A. C. Maggs](#)
"Liquid-hexatic transition for soft disks",
 Physical Review E **108**, 024103 (2023)
12. [Y. Nishikawa](#) and [L. Berthier](#)
"Collective relaxation dynamics in a three-dimensional lattice glass model",
 arXiv:2307.08110 (2023)
13. [K. Morita](#), [Y. Nishikawa](#) and [M. Ohzeki](#)
"Random postprocessing for combinatorial Bayesian optimization",
 Journal of Physical Society of Japan (in press)

Others

1. [stresampling](#) : Python package for statistical analysis of stationary timeseries using resampling methods
2. [SoftDisks](#) : CUDA implementation of a Massively Parallelized Monte Carlo algorithm for two-dimensional hard and soft disks
3. [Dataset on Zenodo](#) for "Liquid-hexatic transition for soft disks"