May 29, 2025

Kenshi Kuroki (黒木 健志)

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Personal Data

Date of birth:	Jan. 21, 1996
Age:	29
Place of birth:	Nagasaki, Japan
Nationality:	Japan

Present Position and Affiliation

Postdoctoral Fellow (Supervisor: Prof. Tetsufumi Hirano)
Faculty of Science and Technology, Sophia University, Japan

Academic Position

Apr. 2024 – present	**Postdoctoral Fellow** (Supervisor: Prof. Tetsufumi Hirano) Faculty of Science and Technology Sophia University, Japan
Apr. 2021 – Mar. 2024	**Research Assistant** (Supervisor: Prof. Tetsufumi Hirano) Faculty of Science and Technology Sophia University, Japan

Education

Apr. 2021 – Mar. 2024	**Doctor of Philosophy in Physics (Ph.D.)** Department of Physics, Faculty of Science and Technology Sophia University, Japan Graduation date: Mar. 31, 2024 Supervisor: Prof. Tetsufumi Hirano Dissertation title: “Hadron correlation and interaction from a dynamical model in high-energy nuclear collisions”
Apr. 2019 – Mar. 2021	**Master of Science in Physics (M.Sc.)** Department of Physics, Faculty of Science and Technology Sophia University, Japan Graduation date: Mar. 31, 2021 Supervisor: Prof. Tetsufumi Hirano Dissertation title: “Effects of event-by-event fluctuations in ultra-central heavy-ion collisions”
Apr. 2015 – Mar. 2019	**Bachelor of Science (B.S.)** Department of Engineering and Applied Science, Faculty of Science and Technology Sophia University, Japan Graduation date: Mar. 31, 2019

Award

Jun. 2024 **Exemption from Return for Particularly Outstanding Achievement**, Japan Student Services Organization (JASSO)

Fellowship/Scholarship

Apr. 2021 – Mar. 2024 Sophia Alumni Entrepreneurs Club Scholarship
Apr. 2021 – Mar. 2024 Japan Student Services Organization (JASSO) Scholarship
Apr. 2021 – Mar. 2024 Sophia University Graduate School Scholarship for Fostering Researchers in Doctoral Program

Membership of Academic Society

The Physical Society of Japan

Community Service

Organizer for Jet Modification and Hard-Soft Correlations (SoftJet 2024), Tokyo, Japan, Sep. 28–29, 2024, (Local Organizing Committee)

Computational Skill

Operating System Linux, Windows
Programming C/C++, Python
Miscellaneous Shell (Bash, zsh), LaTeX, gnuplot, Github, Microsoft Office

Language Skill

Japanese Native
English Proficient

Reference

Tetsufumi Hirano
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Publications

Citation data is based on INSPIRE (Mar. 23, 2025).

Refereed Journal

1. **K. Kuroki, A. Sakai, K. Murase, and T. Hirano**, (Corresponding author)

   "Hydrodynamic fluctuations and ultra-central flow puzzle in heavy-ion collisions", **Phys. Lett. B 842, 137958 (2023)**, arXiv:2305.01977 [nucl-th]. ***[13 citations]***

Conference Proceedings

- **K. Kuroki and T. Hirano**, (Corresponding author, Refereed)

  "p–ϕ femtoscopic correlation analysis using a dynamical model", **The 21st International Conference on Strangeness in Quark Matter (SQM 2024)**, Strasbourg, France, Jun. 5, 2024, **EPJ Web Conf. 316, 03009 (2025)**, arXiv:2410.01204 [hep-ph]. ***[0 citations]***

Presentations

The speaker is marked with a circle.

Invited Talk

- ◯**K. Kuroki and T. Hirano**,

  "Effects of collision dynamics on pϕ correlation function" (Japanese), **2nd Workshop on Intersection of J-PARC and Heavy Ion Collision Experiments**, Tokai, Ibaraki, Japan, Mar. 7, 2025.

- ◯**K. Kuroki and T. Hirano**,

  "Effects of dynamics on interaction study via femtoscopy" (Japanese), **Go-Forward 2025**, Nagasaki, Japan, Feb. 28, 2025.

- ◯**K. Kuroki and T. Hirano**,

  "Effects of collision dynamics on pϕ femtoscopy", **10th Asian Triangle Heavy-Ion Conference - ATHIC 2025**, Berhampur, India, Jan. 15, 2025.

- ◯**K. Kuroki and T. Hirano**,

  "p–ϕ interaction from femtoscopy using a dynamical model", **International workshop on J-PARC hadron physics 2024 (J-PARC Hadron 2024)**, Tokai, Ibaraki, Japan, Jul. 23, 2024.

- ◯**K. Kuroki, A. Sakai, K. Murase, and T. Hirano**,

  "Effects of hydrodynamic fluctuations on anisotropic flow in ultra-central heavy-ion collisions" (Japanese), **Post Quark Matter 2019**, Nagoya University, Nagoya, Japan, Dec. 22, 2019.

Invited Seminar

- ◯**K. Kuroki**,

  "Study on hadron correlations and interactions using a dynamical model" (Japanese), **42nd Heavy Ion Pub workshop**, Kyoto University, Kyoto, Japan, Mar. 26, 2025.

- ◯**K. Kuroki**,

  "Phenomenology of high-energy nuclear collisions using relativistic hydrodynamic models" (Japanese), **Sohaken Seminar**, Hiroshima University, Hiroshima, Japan, Jul. 3, 2023.

Contributed Talk

- ◯**K. Kuroki and T. Hirano**,

  "p–ϕ femtoscopic correlation analysis using a dynamical model", **The 21st International Conference on Strangeness in Quark Matter (SQM 2024)**, Strasbourg, France, Jun. 5, 2024.

- ◯**K. Kuroki and T. Hirano**,

  "p–ϕ femtoscopy using a dynamical model" (Japanese), **The Physical Society of Japan 2024 Spring Meeting**, Online, Japan, Mar. 19, 2024.

- ◯**K. Kuroki, A. Sakai, K. Murase, and T. Hirano**,

  "Effects of hydrodynamic fluctuations in ultra-central heavy-ion collisions" (Japanese), **The Physical Society of Japan the 77th Annual Meeting**, Online, Japan, Mar. 15, 2022.

- ◯**K. Kuroki, A. Sakai, K. Murase, and T. Hirano**,

  "Effects of hydrodynamic fluctuations in ultra-central high-energy heavy-ion collisions" (Japanese), **The Physical Society of Japan the 75th Annual Meeting**, Online, Japan, Mar. 16, 2020.

Poster Presentation

- ◯**K. Kuroki and T. Hirano**,

  "p–ϕ correlation and interaction using a dynamical model" (Japanese), **Tutorial workshop for high-energy heavy-ion collision physics 2024**, Osaka University, Osaka, Japan, Aug. 6, 2024.

- ◯**K. Kuroki, A. Sakai, K. Murase, and T. Hirano**,

  "Effects of hydrodynamic fluctuations in ultra-central Pb-Pb collisions at LHC", **The 29th International Conference on Ultra-relativistic Nucleus-Nucleus Collisions (QM 2022)**, Online, Apr. 6, 2022.

- ◯**K. Kuroki, A. Sakai, K. Murase, and T. Hirano**,

  "Effects of hydrodynamic fluctuations on azimuthal flow in ultra-central heavy ion collisions", **The 28th International Conference on Ultra-relativistic Nucleus-Nucleus Collisions (QM 2019)**, Wuhan, China, Nov. 4, 2019.