

# Kenshi KUROKI (黒木 健志)

June 24, 2025

📍 No.1 Xinqiao North Road, Henan Bei'an, Huicheng District,  
Huizhou, Guangdong, 516000, China

☎ +86-131-4759-2275

✉ k-kuroki@impcas.ac.cn

🌐 <https://kenshikuroki.github.io>

🔗 [id](#) [g](#) [sc](#) [k](#) [t](#) [R](#) [in](#) [Q](#)



## Personal Data

---

Date of birth: Jan. 21, 1996

Age: 29

Place of birth: Nagasaki, Japan

Nationality: Japan

## Present Position and Affiliation

---

### Postdoctoral Fellow

Quark Matter Research Center

Institute of Modern Physics, Chinese Academy of Sciences, China

## Academic Position

---

Jul. 2025 – Present	<b>Postdoctoral Fellow</b> Institute of Modern Physics Chinese Academy of Sciences, China
Jul. 2025 – Present	<b>Co-Researcher Partnership</b> Faculty of Science and Technology Sophia University, Japan
Apr. 2024 – Jun. 2025	<b>Postdoctoral Fellow</b> Faculty of Science and Technology Sophia University, Japan
Apr. 2021 – Mar. 2024	<b>Research Assistant</b> Faculty of Science and Technology Sophia University, Japan

## Education

---

Apr. 2021 – Mar. 2024	<b>Doctor of Philosophy in Physics (Ph.D.)</b> Department of Physics, Faculty of Science and Technology Sophia University, Japan Supervisor: Prof. Tetsufumi Hirano Dissertation title: “Hadron correlation and interaction from a dynamical model in high-energy nuclear collisions”
Apr. 2019 – Mar. 2021	<b>Master of Science in Physics (M.Sc.)</b> Department of Physics, Faculty of Science and Technology Sophia University, Japan 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

## 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++  
Miscellaneous    Shell (Bash, zsh), L<sup>A</sup>T<sub>E</sub>X, gnuplot, Github, Microsoft Office

## Language Skill

---

Japanese    Native  
English    Proficient

## Reference

---

Shunzo Kumano	Professor, Quark Matter Research Center Institute of Modern Physics Chinese Academy of Sciences	📍 No.1 Xinqiao North Road, Henan Bei'an, Huicheng District, Huizhou, Guangdong, 516000, China ✉ shunzo.kumano@kek.jp
Tetsufumi Hirano	Professor, Department of Physics, Faculty of Science and Technology, Sophia University	📍 7-1, Kioi-cho, Chiyoda-ku, Tokyo, 102-8554, Japan ☎ +81-3-3238-3434 ✉ hirano@sophia.ac.jp
Koichi Murase	Research Assistant Professor, Physics Department, Tokyo Metropolitan University	📍 1-1, Minami-Osawa, Hachioji-shi, Tokyo 192-0397, Japan ✉ phys.murase@gmail.com

# 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- $\phi$  femtosopic 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  $p\phi$  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  $p\phi$  femtoscopy”, **10th Asian Triangle Heavy-Ion Conference - ATHIC 2025**, Berhampur, India, Jan. 15, 2025.
- ○K. Kuroki and T. Hirano,  
“ $p$ - $\phi$  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,  
“ $p$ - $\phi$  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,  
“ $p$ - $\phi$  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,  
“ $p$ - $\phi$  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.