

SUNAO SUGIYAMA

CV, Compiled on April 2, 2025

CONTACT INFORMATION

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RESEARCH INTERESTS

Theoretical and Observational cosmology: *large-scale structure of the Universe, gravitational weak/micro lensing, primordial black hole*

COLLABORATIONS

Subaru HSC weak lensing working group, member (2021-present, **co-chair** since 2024Nov)
Dark Enrgy Survey (DES), member (2024-present)

POSITIONS

Current	Postdoctoral researcher, University of Pennsylvania, Philadelphia, the United States Mentor: Prof. Bhuvnesh Jain JSPS Overseas Research Fellow, University of Pennsylvania, Philadelphia, the United States	Sep. 2023 – present Sep. 2023 – present
Past	Postdoctoral researcher, Kavli IPMU, Chiba, Japan Mentor: Prof. Masahiro Takada Project Researcher, Beyond AI, Tokyo, Japan JSPS Research Fellowships for Young Scientists (DC2), Kavli IPMU, Chiba, Japan	Apr. 2023 – Aug. 2023 Apr. 2023 – Aug. 2023 Apr. 2021 – Mar. 2023
Educations	University of Tokyo, Tokyo, Japan, Ph.D. course in Physics Dissertation: “ <i>Joint cosmology analyses using gravitational weak lensing data from Subaru Hyper Suprime-Cam</i> ” Supervisor: Prof. Masahiro Takada University of Tokyo, Tokyo, Japan, M.S. in Physics Dissertation: “ <i>Validation of cosmological analysis based on perturbation theory for wide-field galaxy survey</i> ” Supervisor: Prof. Masahiro Takada University of Tokyo, Tokyo, Japan, B.A. in Physics	Apr. 2020 – Mar. 2023 Apr. 2018 – Mar. 2020 Apr. 2014 – Mar. 2018

GRANT & AWARDS

Grant-in-Aid for JSPS Research Fellows (DC2), Japan Society for the Promotion of Science, Apr. 2021 – Mar. 2023

The School of Science Encouragement Award (Doctoral program), University of Tokyo, the School of Science, Mar. 2023

WINGS IGPEES, course completion, Sep. 2018 – Mar. 2023

TEACHING

Collaborative coding: git and github, **CD3 symposium** 2023, Kavli IPMU

Coadvised Noriaki Nakasawa, a master student at the University of Nagoya, 2022

PROFESSIONAL ACTIVITIES

Society	The Astronomical Society of Japan (ASJ), 2018 – present The Physical Society of Japan (JPS), 2022 – present
Seminar/Workshop/Conference	IPMU weekly lunch seminar (co-organizer), 2019 – 2021 HSC weaklensing mini workshop (organizer), Aug. 2022 Sesto 2025 - Tracing Cosmic Evolution with Galaxy Clusters V (SOC), 2025
Referee	International Journal of Modern Physics D The Astrophysical Journal American Astronomical Society Journals Journal of Cosmology and Astroparticle Physics
Computing	Developer of fft-extended-source , fastnc , dark emulator as a part of Dark Quest Project I can work with C, C++, Python, HSC pipeline (for image analysis)
Accepted Observation	PI of Definitive search for PBH dark matter in the multiverse cosmology with HSC co-PI of Survey of M31 eclipsing binaries: Toward a 1% distance measurement

PUBLIC ENGAGEMENT AND OUTREACH

Apperence on *Cosmic Front, Primordial Black Hole: the master key of the Universe (title in Japanese)* produced by NHK, 2021

Interviewed by Quanta Magazine on *Clashing Cosmic Numbers Challenge Our Best Theory of the Universe*, 2024

Interviewed by Asahi Shimbun on *Breakdown in the standard model of the Universe? An analysis using precise dark matter “map” (title in Japanese)*, 2024

LIST OF PUBLICATIONS, TALKS, AND PRESS RELEASES

The list of publications, talks, and press releases is available [here](#).