SUNAO SUGIYAMA

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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)

Dark Enrgy Survey (DES), member (2024-present)

POSITIONS

University of Pennsylvania, Philadelphia, the United States

Mentor: Prof. Bhuvnesh Jain

JSPS Overseas Research Fellow, Sep. 2023 – present

University of Pennsylvania, Philadelphia, the United States

Past Postdoctoral researcher, Apr. 2023 – Aug. 2023

Kavli IPMU, Chiba, Japan Mentor: Prof. Masahiro Takada

Project Researcher, Apr. 2023 – Aug. 2023

Beyond AI, Tokyo, Japan

JSPS Research Fellowships for Young Scientists (DC2), Apr. 2021 – Mar.

2023

Kavli IPMU, Chiba, Japan

Educations University of Tokyo, Tokyo, Japan, Apr. 2020 – Mar. 2023

Ph.D. course in Physics

Dissertation: "Joint cosmology analyses using gravitational weak lensing data from

Subaru Hyper Suprime-Cam"

Supervisor: Prof. Masahiro Takada

University of Tokyo, Tokyo, Japan, Apr. 2018 – Mar. 2020

M.S. in Physics

Dissertation: "Validation of cosmological analysis based on perturbation theory for

wide-field galaxy survey"

Supervisor: Prof. Masahiro Takada

University of Tokyo, Tokyo, Japan, Apr. 2014 – Mar. 2018

B.A. in Physics

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 IPMU weekly lunch seminar (co-organizer), 2019 – 2021

HSC weaklensing mini workshop, Aug. 2022

Referee International Journal of Modern Physics D

Computing fft-extended-source

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

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.