Masaya Yamamoto *Curriculum Vitae*

CONTACT INFORMATION

Department of Physics
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ACADEMIC POSITIONS

Graduate Research Assistant **2021 - Present**
Department of Physics, Duke University

Graduate Teaching Assistant **2019 - 2021**
Department of Physics, Duke University

Research Intern **2017 - 2018 (Summer)**
Harvard-Smithsonian Center for Astrophysics
Advisor: Dr. Joseph Hora

Undergraduate Research Assistant **2016 - 2019**
Department of Astronomy, Boston University
Advisor: Professor Tereasa Brainerd

EDUCATION

Duke University

Ph.D. candidate, Physics **2019 - Present**
- Fields: Astrophysics/Observational Cosmology
- Advisor: Professor Michael Troxel

Boston University

B.A., Astronomy and Physics **May 2019**
- Cumulative GPA: 3.78, *Magna Cum Laude*

LEADERSHIPS

Dark Energy Survey

Shear Measurement and Calibration Team Co-Lead **2021 - Present**

Data Architect/Science Team, VARIETAS Inc.

Analysis Coordinator **2021 - Present**

Awards & Fellowships

Undergraduate Research Award, **2019**
Institute for Astrophysical Research, Boston University

Undergraduate Research Opportunities (UROP) Funding **2018**
Department of Astronomy, Boston University

UROP Conference Participation Travel Award **2018**
Department of Astronomy, Boston University

Smithsonian Astrophysical Observatory Fellowship Award **2017&2018**
Harvard-Smithsonian Center for Astrophysics

Scientific Collaborations

Dark Energy Survey **2020 - Present**
Weak Lensing Shear Analysis Team

Nancy Grace Roman Space Telescope **2019 - Present**
Cosmology with the HLS Image Simulations Working Group

Submitted Publications

† *Lead writer of alphabetical paper*

1. (†) **Yamamoto, M.**, Troxel, M. A., Jarvis, M., Mandelbaum, R,, Hirata, C. M., Long, H., Choi, A., Zhang, T., Weak Gravitational Lensing Shear Estimation with Metacalibration for the Roman High-Latitude Imaging Survey, *arXiv e-prints*, arXiv:2203.08845 (2022).
2. Kevin X. Wang, Dan Scolnic, M. A. Troxel, Steven A. Rodney, Brodie Popovic, Caleb Duff, Alexei V. Filippenko, Ryan J. Foley, Rebekah Hounsell, Saurabh W. Jha, David O. Jones, Bhavin A. Joshi, Heyang Long, Phillip Macias, Adam G. Riess, Benjamin M. Rose, **Yamamoto, M.**, A Synthetic Roman Space Telescope High-Latitude Time-Domain Survey: Supernovae in the Deep Field, *arXiv e-prints*, arXiv:2204.13553 (2022).
3. Troxel, M. A., Long, H., Hirata, C. M., Choi, A., Jarvis, M., Mandelbaum, R., Wang, K., **Yamamoto, M.**, Hemmati, S., & Capak, P., A synthetic Roman Space Telescope High-Latitude Imaging Survey: simulation suite and the impact of wavefront errors on weak gravitational lensing, MNRAS, 501, 2044 (2021).
4. Brainerd, T. G., **Yamamoto, M.**, Satellite galaxies in the Illustris-1 simulation: anisotropic locations around relatively isolated hosts, MNRAS, 489, 459 (2019)

Talks & Conferences

1. Kavli Institute for the Physics and Mathematics of the Universe **July 2022**
   Development of the Realistic Image Simulations for the Nancy Grace Roman Space Telescope
2. Dark Energy Survey Collaboration Meeting at Duke University **May 2022**
   Plenary Talk on the Year-6 Shear Catalog Development
3. 233rd American Astronomical Society (AAS) Meeting in Seattle **Jan 2019**
   Undergraduate Poster Session on the Satellite galaxies in the Illustris-1 simulation

Technical Skills

Languages & Computing Frameworks

- Programming & Scripting Languages: Python (*NumPy* & *SciPy*), SQL (Oracle & Standard), GQL (Cypher), Mathematica, Bash, LaTeX
- Machine Learning Frameworks: scikit-learn
- High-Performance Computing environments: Cori at National Energy Research Scientific Computing Center (NERSC), Duke Compute Cluster
- Distributed & Parallel Programming Methodologies: MPI

Systems & Platforms

- Operating Systems: Linux, Unix
- Cloud Platforms: GCP (Big Query), AWS (Neptune), Neo4j

Other Skills

Languages

Japanese (native)

English (native)

French (conversational)

References

Michael A. Troxel

Assistant Professor, Department of Physics, Duke University

PhD Supervisor

Email: michael.troxel@duke.edu; Phone: 919-660-6773

Matthew R. Becker

Assistant Physicist, Argonne National Laboratory

Collaborator in the Dark Energy Survey

Email: mrbecker@anl.gov; Phone: 630-252-4212