

Rachel Mandelbaum

Professor at Carnegie Mellon University

Pittsburgh, PA, US

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Biography

Rachel Mandelbaum's research interests are predominantly in the areas of observational cosmology and galaxy studies. This work includes the use of weak gravitational lensing and other analysis techniques, with projects that range from development of improved data analysis methods, to actual application of such methods to existing data. She has developed algorithms that are used by leading astronomical surveys, including the Hyper Suprime-Cam Survey and the upcoming Legacy Survey of Space and Time (LSST), Euclid and Roman Space Telescope projects and their associated scientific collaborations. She currently serves as CMU's PI for the LINCC Frameworks initiative, developing open-source software to enable the LSST science community's robust, scalable analyses of astronomical imaging data. She served as the spokesperson for the LSST's Dark Energy Science Collaboration (DESC) from 2019-2021, and previously served as the DESC analysis coordinator and co-leader of the weak lensing working group.

Industry Expertise

Aerospace

Areas of Expertise

Galaxy Studies, Observational Cosmology, Astronomical Surveys, Space

Event Appearances

Invited Review

(2022) EchoIA Kickoff Workshop

Invited Talk on LINCC Frameworks

(2022) LSST Solar System Readiness Sprint

Invited Talk, "New Frontier in Cosmology with the Intrinsic Alignments of Galaxies?"

(2022)

Education

Princeton University
Ph.D. Physics

Princeton University
A.B. Physics

Accomplishments

Simons Investigator in Astrophysics
2019

Falco-DeBenedetti Career Development Professor
2013

Alfred P. Sloan Fellow
2013

AAS Annie Jump Cannon Prize
2011

Hubble Fellow
2006

Kusaka Memorial Prize, Princeton University
2000

DOE Early Career Award
2012

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