

Xiaowei Ou

Department of Physics, Massachusetts Institute of Technology
 xwou@mit.edu
 github.com/xou-mit

Education

PhD, Physics, Massachusetts Institute of Technology Sep 2020 – Present
 Advisors: A. Frebel, L. Necib
 Study the Galaxy formation history and structure using stellar kinematics and chemistry

Bachelor of Science, Physics&Astronomy, University of Michigan Sep 2016 – Apr 2020

Honors and Awards

LSST Discovery Alliance Data Science Fellowship, Northwestern University 2023 – 2025
Charlie Changnan Wang Fellowship, Massachusetts Institute of Technology 2020
Jerome and Isabella Karle Physical Sciences Award, University of Michigan 2020
Patrick Dahlin Memorial Award, University of Michigan 2019
James B. Angell Scholar, University of Michigan 2018 – 2019
Granader Family Award for Excellence in Multilingual Writing, University of Michigan 2017

Research Interests

Galactic dynamics: Milky Way rotation curve, dark matter distribution of the Milky Way and dwarf galaxies, tidal interaction between Milky Way and dwarf galaxies

Stellar archeology: Metal-poor stars, chemical evolution of the Milky Way and dwarf galaxies, Milky Way formation history, stellar abundances, spectroscopic observations and analyses

Contributed Talks and Posters

Contributed talks:

TeVPA, Chicago, IL, USA 2024
 First Stars VII, New York, NY, USA 2024
 Kashiwa Dark Matter Symposium, Tokyo, Japan 2024
 Galactic Frontiers: Dwarf Galaxies in the Local Volume and Beyond, New York, NY, USA 2024
 Phenomenology 2023 Symposium, Pittsburgh, PA, USA 2023
 AAS 241, Seattle, WA, USA 2023

Seminar talk:

Yale University Galaxy Lunch, New Haven, CT, USA 2024

Posters:

Dwarf Galaxies, Star Clusters, and Streams in the LSST Era, Chicago, IL, USA 2024
 AAS 235, Honolulu, HI, USA 2020

Teaching Experience

Teaching Assistant at MIT May 2021 – May 2025
 TA, Experimental Physics I, 8.13, Physics Spring 2022
 TA, Introduction to Astronomy, 8.282, Physics Spring 2023
 TA, Introduction to Astronomy, 8.282, Physics Spring 2024

Teaching Assistant at University of Michigan May 2018 – May 2020
 TA, Physics for the Life Sciences I, PHYSICS 135, Physics Spring 2018
 Writing Fellow, General Physics I, PHYSICS 140, Physics Fall 2018
 Writing Fellow, General Physics I, PHYSICS 140, Physics Winter 2019

Grader, Intermediate Mechanics, PHYSICS 401, Physics

Fall 2019

Public Engagement

Science communication:

Member/Co-chair, Astrogazer Sidewalk Astronomy, MIT

Sep 2022 – Present

Public Outreach, Society of Physics Students, University of Michigan

Sep 2017 – May 2020

Press coverage:

Study: Stars travel more slowly at Milky Way's edge, MIT News

Jan 2024

Service and Leadership Experience

Committee Member, Journal Club, MIT

May 2023 – Present

Vice President, Physics Graduate Student Council, MIT

May 2021 – May 2022

Treasurer, Ashdown Graduate House Executive Committee, MIT

May 2021 – May 2023

Member/Peer Mentor, Michigan Research Community, University of Michigan

Sep 2016 – Apr 2018

Co-Chair, Mosher Jordan Undergrad House Multicultural Council, University of Michigan

Sep 2016 – Apr 2018

Referee, The Astrophysical Journal

2023 – Present

Referee, Publications of the Astronomical Society of Australia

2024 – Present