Weichen Wang **Curriculum Vitae**

CONTACT INFORMATION

Department of Physics,
University of Milano-Bicocca
Ex U2, Piazza della Scienza, 3, Milan 20126, Italy

E-mail: weichen.wang@unimib.it
https://weichenstars.github.io

EDUCATION

Johns Hopkins University, Baltimore MD, United States
Department of Physics and Astronomy, 9/2016 - 12/2022
Ph. D. in Astrophysics
Thesis Advisors: Susan Kassin, Timothy Heckman

Tsinghua University, Beijing, China
Department of Physics, 8/2012 - 7/2016
B. Sc. in Physics (graduated with honors)
Thesis Advisor: Shude Mao

RESEARCH EXPERIENCE

University of Milano-Bicocca, Milan MI, Italy 2022–now
Department of Physics, Postdoc Researcher (European Research Council funded)
Research topics: the circumgalactic medium and cosmic web
Advisor: Sebastiano Cantalupo

Johns Hopkins University, Baltimore MD, United States 2016–2022
Department of Physics and Astronomy, Graduate Researcher
Research topics: galactic winds at $z \sim 1$; dust attenuation of galaxies at $z \sim 1$
Advisor: Susan Kassin

University of California, Santa Cruz CA, United States 2/2020-3/2021; 7-9/2015
Department of Astronomy, Visiting Student
Research topics: galactic winds at $z \sim 1$; spatially resolved star formation and dust attenuation of $z \sim 1$ galaxies
Hosts: Sandra Faber, David Koo

Tsinghua University, Beijing, China 2014 - 2016
Tsinghua Center for Astrophysics, Undergraduate Researcher
Research topic: impacts of dark matter halo substructures on gravitational lensing systems
Advisor: Shude Mao

PUBLICATIONS

W. Wang, S. Cantalupo, A. Pensabene et al. submitted (2024)
A Giant Disk Galaxy Two Billion Years After The Big Bang

W. Wang, S. A. Kassin, S. M. Faber, D. C. Koo et al., ApJ, 930, 146 (2022) [arXiv: 2109.12133]:
The Baltimore Oriole's Nest: Cool Winds from the Inner and Outer Parts of a Star-Forming Galaxy at $z = 1.3$

W. Wang, S. A. Kassin, C. Pacifici et al., ApJ, 869, 161 (2018) [arXiv: 1811.03671]:
Galaxy Inclination and the IRX-β Relation: Effects on UV Star Formation Rate Measurements at Intermediate to High Redshifts

W. Wang, S. M. Faber, F.-S. Liu et al., MNRAS, 469, 4063 (2017) [arXiv: 1705.05404]:
UVI colour gradients of $0.4<z<1.4$ star-forming main-sequence galaxies in CANDELS: dust extinction and star formation profiles

All the published first-author papers have been featured in ARA&A.
Click this ADS link for the full list of publications (20 in total as of 08/2024, > 900 citations).

Observations and Proposals

VLT P112 Program (Co.I.; P.I.: Sebastiano Cantalupo): *Connecting the dots with MUSE: the Cosmic Web in emission around a massive structure at z=3,* 84 hours, 2024-2025

Subaru S24A Program (Co.I.; P.I.: Yongming Liang): *Origin and properties of an intergalactic-scale, metal-enriched filament at z=2.3,* 2 nights, 2024

JWST Cycle-2 Program (Co.I.; P.I.: Susan Kassin):
Galaxy angular momentum alignment with filaments at $z \sim 3$: The effect of large scale structure on galaxies, 67.8 hours, scheduled for 2024

JWST Cycle-1 Program (Co.I. with major contributions; P.I.: Susan Kassin):
A Pathfinder for JWST Spectroscopy: Deep High Spectral Resolution Maps of Galaxies over 1<z<6, 74.3 hours, scheduled for 2023

JWST Cycle-1 Program (joined in 2022 with major contributions; P.I.: Sebastiano Cantalupo): *Unraveling the Knots of Gaseous Cosmic Web Filaments at z∼3 through H-alpha Emission Observations,* 24.4 hours, scheduled for 2023

JWST Cycle-1 Program (P.I.: Steven Finkelstein): *The Cosmic Evolution Early Release Science (CEERS) Survey,* 2022-2023

HST Cycle-30 Program (P.I.: Sebastiano Cantalupo): *Resolving a Massive Node of the Cosmic Web at z=3,* 22 orbits, scheduled for 2023

ALMA Cycle-8 Program (Co.I.; P.I.: Raymond Simons): *CO Kinematics at Cosmic Noon: Timing the Redistribution of Metals Around Galaxies,* 23.1 hours, 2022

ALMA Cycle-7 Program (P.I.), 14.7 hours, 2021: *Does molecular gas follow the motion of ionized gas inside typical high-redshift star-forming galaxies?* Observations not completed due to weather and the impact of COVID-19 in Chile

NASA ADAP Proposal (Co.I. with major contribution; P.I.: Susan Kassin): *Expelling Gas from Galaxies in the Distant Universe: Resolved Winds and Kinematics at z∼ 1,* $485k, 2020-2022

On-site observations at the ARC 3.5m telescope, Apache Point Observatory, NM, 11/2016

Talks

Observing and Simulating Galaxy Evolution in the Era of JWST, Ascona, Switzerland, 2024
Galaxies and diffuse gas in large-scale overdense environments at high redshift, Italy, 2024
What Matter(s) Around Galaxies 2024 (SOC/LOC member), Lake Como, Italy, 2024
Astronomy Seminars, Tsinghua University/Peking University/NAOC, Beijing, China, 2023/2024
Astronomy Seminar, University of California, Riverside, CA (remote), 2021
Steward/NOIRLab Galaxy Group Lunch Talk, University of Arizona, AZ (remote), 2021
Baltimore Wind Workshop, Baltimore, MD, 2021
Massively Parallel Large Area Spectroscopy from Space, IA, Portugal (remote), 2021
Astrophysics Seminar at University of Missouri, MI (remote), 2020
The Art of Measuring Physical Parameters in Galaxies, UC Riverside, CA, 2018
Santa Cruz Galaxy workshop, Santa Cruz, CA, 2018
AAS Meeting 231, Washington DC, 2018
Dusting the Universe, University of Arizona, AZ, 2018
Plumbing Star-Formation Rates in the Age of JWST, Texas A&M University, TX, 2017
JHU/STScI Galaxy Journal Club, Baltimore, MD, 2017, 2021

Mentorship

Ying Qin, JHU undergraduate in physics major, 2021-2023
Studying the Mg II emission and leaking ionizing photons from low-mass galaxies at $z \sim 1$.

M. Francesca Uboldi, Bicocca undergraduate in physics major, 2023-2024:
Relations between galaxy colors and morphology based on the JWST medium-band data.

Teaching Experience

Laboratory of Data Analysis for Master Students in Astrophysics

University of Milano-Bicocca, Spring 2023

Teaching Assistant, General Physics I for Biological Science Majors (171.103)
Johns Hopkins University, Fall 2016

Teaching Assistant, General Physics Laboratory (171.111)
Johns Hopkins University, Fall 2016

Academic Service

Referee for The Astrophysical Journal, Astronomy and Astrophysics

Co-Organizer and SOC/LOC member, Conference "What Matter(s) Around Galaxies 2024", Lake Como, Italy, 2024

Awards

The IAU travel grant, 2019.

First-year graduate student award, the JHU Department of Physics and Astronomy, 2016.

National Astronomical Observatory of China Scholarship, 2016.

Outreach Activities

Science outreach day at University of Milano-Bicocca, Italy 2024

A community event open to students from local primary/middle schools in Milan; co-designing the exhibition about astrophysical science with JWST

Member of the Astro Scholars program 2021-2022

An annual week-long program about astrophysics and computer programming for undergraduates from under-represented backgrounds; serving as a core member of the hiring & education team; monthly tag-up with the students during the rest of the year

Member of the Physics and Astronomy Graduate Students (PAGS) Outreach Team, Johns Hopkins University, 2017-2019

Supporting visits of students from Baltimore local primary/middle schools around once per semester and teaching fundamental physics with educational demos

The JHU Physics Fair, 2016-2019

Annual event open to the JHU and Baltimore local communities; teaching fundamental physics and astronomy with educational demos

Volunteer teacher at the Pengzhai Primary School, Guizhou, China, Summer/2013

Teaching multiple STEM-related courses for Grade 3-6; the school, with very limited resources, is located in one of the least developed areas of the country.