

Joanne Tan

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RESEARCH INTERESTS

the circumgalactic medium (CGM), galaxy formation and evolution, galaxy-black hole relationships, galaxy dynamics and kinematics, machine learning applications on and statistical inferences from astronomical datasets

EDUCATION & APPOINTMENTS

Max Planck Institute for Astrophysics (MPA)

Garching, Germany

Ph.D in Physics

Sep 2022–present

The cosmological formation of massive galaxies since $z=5$

Advisor: Dr. Thorsten Naab

Texas A&M University (TAMU)

College Station, TX, USA

MS in Astronomy

Aug 2020–May 2022

Fraction of tidal disruption events in AGNs hosted by dwarf galaxies

Advisors: Prof. Jonelle Walsh, Dr. Guang Yang

Post-baccalaureate research assistant

Berkeley, CA, USA

Advisors (on separate projects): Prof. Gibor Basri, Dr. Laurie Pearce

Jan 2020–Jul 2020

University of California, Berkeley (UC Berkeley)

Berkeley, CA, USA

BA in Astrophysics, BA in Physics

Aug 2016–Dec 2019

PUBLICATIONS

1. **Tan, J.**; Naab, T.; Röttgers, B.; Černetič, M.; Kauffmann, G.; et al. “*Shedding light onto the kinematics of the circumgalactic medium with metal absorption lines analysis of cosmological zoom simulations*”, in prep.
2. **Tan, J.**; Yang, G.; Walsh, J. L.; Bauer, F. E.; Brandt, W. N.; Chen, C.-T.; Luo, B.; Sun, M.; Xue, Y.; et al. “*Tidal Disruption Events Rarely Power the AGNs Observed in Dwarf Galaxies*”, in prep.
3. Breger, G.; **Tan, J.**; and Pearce, L. E.. “*Heuristics for the Study of Neo-Assyrian Letters: Then and Now*”, in prep.
4. Hauschild Roier, G. R.; Storch-Bergmann, T.; McDermid, R. M.; Walsh, J. L.; **Tan, J.**; Cohn, J.; et al, “*Gas inflows in the polar ring of NGC 4111: the birth of an AGN*”, [MNRAS 2022, 512, 2556](#).
5. Basri, G.; Streichenberger, T.; McWard, C.; Edmond IV, L.; **Tan, J.**; Lee, M.; Melton, T.. “*A New Method for Estimating Starspot Lifetimes Based on Autocorrelation Functions*”, [ApJ 2022, 924, 31](#)
6. **Tan, J.** and Basri, G.. “*Double-dipping to Refine Stellar Rotation Periods*”, [Astron. Nachr. 2020; 341: 513–518](#).

HONORS & AWARDS

Departmental Merit Fellowship, Department of Physics & Astronomy, TAMU 2020–2022
Fellowship awarded to incoming graduate students.

Undergraduate Research Apprentice Program (URAP) Apprentice 2018–2019
Worked with **Dr. Laurie Pearce** and **Gil Breger** on *Computational Ancient Astronomy and Reproducible Research*.

SKILLS

Computer Languages	Python, IDL, L ^A T _E X, bash, R
Other Software/Tools	git, html, CSS, PyRAF/IRAF, CIAO, X-CIGALE, Cloudy, CUDA, PyTorch, Tensorflow, Keras, Scikit-learn, PyGAD, pPXF, LabVIEW
Languages	<i>Native:</i> English, Mandarin Chinese; <i>Advanced:</i> Malay; <i>Beginner/Intermediate:</i> Cantonese, Norwegian, French, German, Korean

TALKS & PRESENTATIONS

Coffee Talk, Institute for Astronomy, Royal Observatory <i>Edinburgh, United Kingdom</i> (Invited)	Oct 2023
Astrophysics Group Seminar, UCL Dept of Space and Climate Physics <i>Dorking, United Kingdom</i> (Invited)	Jun 2023
XV IMPRS Symposium <i>Garching, Germany</i> (Contributed)	Jun 2023
Global Malaysian Astronomers' Convention (GMAC) <i>Kuala Lumpur, Malaysia</i> (Invited)	Jan 2023
Astronomy Poster Summer Intern Symposium (APSYS), UC Berkeley <i>Berkeley, CA</i> (Contributed poster)	Aug 2019
The Interplay of Prosopography, Astronomy, and Graphology, LMU München <i>Munich, Germany</i> (Invited)	Jul 2018

PROFESSIONAL MEMBERSHIP & SERVICE

Member of post-conference working groups and future conference planning committee, GMAC 2023	2023–
Academic Council member, Malaysia Olympiad on Astronomy & Astrophysics	2023–
LOC member, XV IMPRS Symposium, <i>Garching, Germany</i>	2023
LOC member, The Multiphase Circumgalactic Medium, <i>Ringberg, Germany</i>	2023
Member of the Steering Committee & Co-Lead of the Publicity Working Group, GMAC 2023, <i>Kuala Lumpur, Malaysia</i>	2022–2023

TEACHING & GRADING EXPERIENCE

Graduate Student Instructor, TAMU Physics 201: College Physics (Lab)	Fall 2020, Spring 2021
Undergraduate Student Instructor, UC Berkeley Astro 120: Optical & Infrared Astronomy Lab	Fall 2019
Course Grader, UC Berkeley – Astro C161: Relativistic Astrophysics and Cosmology	Spring 2020
– Astro C12: The Planets	Spring 2019
– Physics 77: Intro to Computational Techniques in Physics	Spring 2019
– Astro C10: Introduction to General Astronomy	Fall 2018

OUTREACH EXPERIENCE

Volunteered at the “Meet-an-Astronomer” event at GMAC 2023 pre-conference roadshow, <i>Kuala Lumpur, Malaysia</i>	2023
Volunteered for departmental outreach events organized by the Department of Astronomy, e.g., Astronomy Night (monthly), Bay Area Science Festival and Cal Day (annual), <i>Berkeley, CA</i>	2017–2019
As a member of the <i>Undergraduate Astronomy Society</i> , mentored lowerclassmen and transfer students to ease their transition into the school and department community, <i>Berkeley, CA</i>	2017–2019