

Joanne Tan

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RESEARCH INTERESTS

the circumgalactic medium (CGM), galaxy formation and evolution, galaxy-black hole relationships, galaxy dynamics and kinematics, AGN variability, high-performance computing and computational astrophysics, machine learning

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.**; Yang, G.; Walsh, J. L.; Bauer, F. E.; Brandt, W. N.; Chen, C.-T.; Luo, B.; Sun, M.; Xue, Y.; et al. “Do tidal disruption events power the AGNs observed in dwarf galaxies?”, in prep.
2. Breger, G.; **Tan, J.**; and Pearce, L. E.. “Heuristics for the Study of Neo-Assyrian Letters: Then and Now”, in prep.
3. Hauschild Roier, G. R.; Storchi-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](#).
4. 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](#)
5. **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 Apprenticeship 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^AT_EX, bash, git, R

Other Software

PyRAF/IRAF, CIAO, X-CIGALE, pPXF, LabVIEW, CUDA, PyGAD

Languages

Native: English, Mandarin Chinese; *Advanced*: Malay;

Beginner/Intermediate: Cantonese, Norwegian, French, German, Korean

TALKS & PRESENTATIONS

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

PROFESSIONAL MEMBERSHIP & SERVICE

Academic Council member , Malaysia Olympiad on Astronomy & Astrophysics	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)	<i>Fall 2020, Spring 2021</i>
Undergraduate Student Instructor, UC Berkeley Astro 120: Optical & Infrared Astronomy Lab	<i>Fall 2019</i>
Course Grader, UC Berkeley – Astro C161: Relativistic Astrophysics and Cosmology	<i>Spring 2020</i>
– Astro C12: The Planets	<i>Spring 2019</i>
– Physics 77: Intro to Computational Techniques in Physics	<i>Spring 2019</i>
– Astro C10: Introduction to General Astronomy	<i>Fall 2018</i>

OUTREACH EXPERIENCE

Volunteered at the “Meet-an-Astronomer” event at GMAC 2023’s pre-conference roadshow, <i>Kuala Lumpur, Malaysia</i>	2023
As the Astronomy Coordinator of the <i>Society of Women in the Physical Sciences</i> , helped organize and coordinate club events, workshops, and tea or meetings with colloquium speakers, <i>Berkeley, CA</i>	2018–2019
Volunteered for departmental outreach events organized by the Department of Astronomy, e.g., Astronomy Night (monthly), Bay Area Science Festival (annual), Cal Day (annual), joint commencement with the Department of Physics, <i>Berkeley, CA</i>	2017–2019
As a member of the <i>Undergraduate Astronomy Society</i> , mentored lowerclassmen and transfer students to help them transition into the school and department community, <i>Berkeley, CA</i>	2017–2019