

# Joanne Tan

Max Planck Institute for Astrophysics  
Garching bei München, Germany

[tanofspace.github.io](https://tanofspace.github.io) | [jtan@mpa-garching.mpg.de](mailto:jtan@mpa-garching.mpg.de) | [@tanofspace](https://twitter.com/tanofspace) | [tanofspace.bsky.social](https://tanofspace.bsky.social)

## RESEARCH INTERESTS

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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

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### 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

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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

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**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

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<b>Computer Languages</b>	Python, IDL, L <sup>A</sup> T <sub>E</sub> X, bash, R
<b>Other Software/Skills</b>	PyRAF/IRAF, CIAO, X-CIGALE, pPXF, LabVIEW, CUDA, git, html
<b>Languages</b>	<i>Native:</i> English, Mandarin Chinese; <i>Advanced:</i> Malay; <i>Beginner/Intermediate:</i> Cantonese, Norwegian, French, German, Korean

## TALKS & PRESENTATIONS

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

## PROFESSIONAL MEMBERSHIP & SERVICE

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

## TEACHING & GRADING EXPERIENCE

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<b>Graduate Student Instructor, TAMU</b> Physics 201: College Physics (Lab)	<i>Fall 2020, Spring 2021</i>
<b>Undergraduate Student Instructor, UC Berkeley</b> Astro 120: Optical & Infrared Astronomy Lab	<i>Fall 2019</i>
<b>Course Grader, UC Berkeley</b> – 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

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Volunteered at the “Meet-an-Astronomer” event at GMAC 2023 pre-conference roadshow, <i>Kuala Lumpur, Malaysia</i>	<i>2023</i>
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>	<i>2017–2019</i>
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>	<i>2017–2019</i>