

Yimeng Tang

University of California, Santa Cruz
Department of Astronomy & Astrophysics
1156 High St, Santa Cruz, CA 95064

Email: ymtang@ucsc.edu
Website: ymtang2000.github.io
ORCID: [0000-0003-2876-577X](https://orcid.org/0000-0003-2876-577X)

RESEARCH INTERESTS

- Assembly histories of galaxies and their star clusters across diverse environments
- Ultra-diffuse galaxies and the low-surface-brightness Universe
- Dark matter deficient galaxies, galaxy–halo connection
- Stellar feedback and starburst galaxies
- Co-evolution of galaxies and supermassive black holes

EDUCATION

Ph.D. in Astronomy, University of California, Santa Cruz 2027 (Expected)

Advisor: Aaron Romanowsky, Kevin Bundy

Thesis: Stellar populations and globular clusters in dwarf galaxies

M.S. in Astronomy, University of California, Santa Cruz 2024

B.S. in Astronomy (Highest Honor), University of Science and Technology of China 2021

Advisor: Hong-Xin Zhang, Xu Kong

Thesis: Observational constraints on the evolution of nearby galaxies from IFU spectroscopy

SELECTED AWARDS & HONORS

Chancellor's Dissertation Year Fellowship, UCSC 2026

USTC Undergraduate Honorary Rank ($\sim$ top 5%), USTC 2021

Guo Moruo Scholarship ($\sim$ top 2%, **highest honor for undergraduates at USTC**), USTC 2020

National Scholarship ($\sim$ top 2%), Ministry of Education of China 2020 & 2018

NAOC Scholarship, National Astronomical Observatories of Chinese Academy of Sciences 2020

Scholarship of Yan Jici Talent Program in Physics ($\sim$ top 10%), USTC 2020 & 2019

Outstanding Student Scholarship, Gold Prize ($\sim$ top 5%), USTC 2019

Outstanding Freshman Scholarship, USTC 2017

OBSERVING PROGRAMS

As Principal Investigator:

1. Keck 2025A (0.5 night, KCWI): *Spectroscopic mapping of an ultra-diffuse galaxy with massive star-forming clumps*

As Co-Investigator:

15. Roman Cycle 1 (Analysis): *Extragalactic globular clusters and galaxy formation with Roman*
14. Gemini 2026B (13 hours, GMOS): *A Benchmark Globular Cluster System for the Survey Era: GMOS Spectroscopy of NGC 1527*
13. Subaru 2026B (6 hours, HSC): *Imaging of Perseus cluster dwarf galaxies and globular clusters*
12. Keck 2026B (2.5 nights, KCWI & LRIS): *Testing a Possible Second Trail of Dark-Matter-Deficient Dwarf Galaxies in the Outskirts of Fornax*
11. JWST Cycle 5 (10.3 hours, NIRCам & NIRISS): *Testing the formation of a trail of dwarf galaxies through tip of the red giant branch distances*
10. Keck 2026A (1.5 nights, KCWI): *The stellar population gradients of ultra-diffuse galaxies*
9. VLT 2025A (3 hours, MUSE): *Young and Cluster-Rich: The Progenitors of Globular Cluster-Rich Ultra-Diffuse Galaxies?*

8. Keck 2025A (2 nights, KCWI): *The stellar population gradients of ultra-diffuse galaxies*
7. VLT 2024B (17 hours, MUSE): *FCC 224: another dark matter free dwarf galaxy?*
6. Keck 2024B (1 night, KCWI): *Dark matter in NGC 1052 dwarf galaxies*
5. Keck 2024B (2 nights, KCWI): *Globular clusters and dark matter in ultra-diffuse galaxies*
4. Keck 2024B (1 night, KCWI): *A critical test for dark matter in dwarf galaxies of the NGC 1052 group*
3. Keck 2023A (1 night, DEIMOS): *Unravelling the origins of cluster ultra-diffuse galaxies*
2. Keck 2022B (3 nights, DEIMOS): *Unravelling the origins of ultra-diffuse galaxies in the Perseus cluster*
1. HST Cycle 29 (15 orbits, ACS): *A trail of dark matter-free galaxies in the NGC1052 group*

Observing Experience: Keck Observatory (12 nights, KCWI, DEIMOS, OSIRIS), Lick Observatory (3 nights, Shane, Nickel)

SELECTED TALKS & PRESENTATIONS

- 2026 Santa Cruz Galaxy Workshop (Santa Cruz, California, USA) Aug 2026
Talk: Stellar Population of Dwarf Galaxies in the Local Universe
Talk: Local Dwarf Galaxies in Extreme
- 2026 Rubin Observatory Community Workshop (SLAC, Menlo Park, California, USA) Jul 2026
Talk: A Comprehensive Study of Dwarf Galaxies in the Era of Next-generation Telescopes
Talk: Globular Clusters in Nearby Galaxies: Numbers and Stellar Populations
- Near Field Cosmology in the Era of Big Data: Local Group and Beyond (Toronto, Canada) Jul 2026
Talk: A Comprehensive Study of Dwarf Galaxies with Euclid, Roman and Rubin
- Kavli Institute for Astronomy and Astrophysics, Peking University (Beijing, China) Apr 2026
 Dept. of Astronomy, Tsinghua University (Beijing, China)
 Dept. of Astronomy, University of Science and Technology of China (Hefei, China)
 School of Astronomy & Space Science, Nanjing University (Nanjing, China)
Talk: Puzzles of the Small: Diversity of Dwarf Galaxies and Their Globular Clusters Across Environments
- 10 Years of Ultra-Diffuse Galaxies: Past Perspectives and Future Prospects (Benasque, Spain) Aug 2025
Talk: Globular Clusters as Guides: UDGs and Dwarf Galaxies in Various Environments
- 2025 Santa Cruz Galaxy Workshop (Santa Cruz, California, USA) Aug 2025
Talk: Connection Between Dwarf Galaxies and Globular Clusters – Insights from the Perseus Cluster
Talk: Central Emission-line Spectra of SDSS Galaxies: The Basic Evolutionary Path and its Relation to AGN Activity
- 2024 Santa Cruz Galaxy Workshop (Santa Cruz, California, USA) Aug 2024
Talk: A New Candidate Dark Matter Deficient Galaxy with Unusual Globular Clusters
- Dwarf Galaxies, Star Clusters, and Streams in the LSST Era (Chicago, Illinois, USA) Jul 2024
Poster: Observational Constraints on the Formation of Dark-matter Deficient Galaxies from Morphologies, Stellar Populations and Globular Clusters
- Dept. of Astronomy, University of Science and Technology of China (Hefei, China) Dec 2023
Talk: Testing the Bullet Dwarf Collision Scenario in the NGC 1052 Group
- 2023 Santa Cruz Galaxy Workshop, (Santa Cruz, California, USA) Aug 2023
Talk: Testing the Bullet Dwarf Collision Scenario in the NGC 1052 Group
- UC Santa Cruz FLASH Talks, (Santa Cruz, California, USA) Jun 2023
Talk: Testing the Bullet Dwarf Collision Scenario in the NGC 1052 Group
- Yan Jici Physics Symposium, University of Science and Technology of China (Hefei, China) May 2021
Talk: Observational constraints on the evolution of nearby galaxies from IFU spectroscopy
- 2019 Annual Conference of the Chinese Astronomical Society (Delhi, China) Sep 2019
Poster: The Origin of Surface Brightness Profile Breaks of Disk Galaxies from MaNGA

PRESS COVERAGE

- Scientific American: [Galaxies without dark matter mystify astronomers](#)
- Keck Observatory: [Evidence of Dark Matter-Free Dwarf Galaxy Challenges Conventional Galaxy Formation Models](#)
- Phys.org: [Observations shed more light on the star formation history of galaxy NGC 2915](#)

SERVICE, MEMBERSHIP & TEACHING

Member, Vera C. Rubin Observatory LSST Science Collaborations	
Member, Roman Science Collaboration	
Member, Analysis of Galaxies At The Extremes (AGATE) Collaboration	
Mentor, Introduction to Research in Physics and Astrophysics (ASTR 9, UCSC)	2026 Winter & Spring
Teaching Assistant, Introduction to Scientific Computing (ASTR 119, UCSC)	2026 Winter
Teaching Assistant, Practical Programming for the Sciences (ASTR 19, UCSC)	2024 & 2022 Spring
Graduate Admission Committee Member, UCSC	2023-2024
Prospective Student Visiting Committee Member, UCSC	2022 & 2023
Student Admissions Ambassador, USTC	2021
Teaching Assistant, Astronomical Labs (ASTR 167, USTC)	2020 Fall
Teaching Assistant, Observational Astronomy (ASTR 170, USTC)	2020 Spring

REFERENCES

Aaron Romanowsky (UC Santa Cruz & San José State U)	aaron.romanowsky@sjsu.edu
Kevin Bundy (UC Santa Cruz)	kbundy@ucsc.edu
Sandra Faber (UC Santa Cruz)	faber@ucolick.org
Hong-Xin Zhang (University of Science and Technology of China)	hzzhang18@ustc.edu.cn
Xu Kong (University of Science and Technology of China)	xkong@ustc.edu.cn

PUBLICATION

[Link to my ADS publication library](#)

First-author Publication:

6. **Y. Tang**, G. S. Anand, A. J. Romanowsky, et al., [New Measurements of Distances to Galaxies in the NGC 1052 Field with the Hubble and James Webb Space Telescopes: Testing the Bullet-Dwarf Origin of the Trail](#), 2026, *ApJL*, 1005, L16
5. **Y. Tang**, A. J. Romanowsky, S. Huang, et al., [Connection Between Dwarf Galaxies and Globular Clusters: Insights from the Perseus Cluster Using Subaru Imaging and Keck Spectroscopy](#), 2026, *ApJ*, 998, 254
4. **Y. Tang**, A. J. Romanowsky, J. S. Gannon, et al., [An Unexplained Origin for the Unusual Globular Cluster System in the Ultra-diffuse Galaxy FCC 224](#), 2025, *ApJ*, 982, 1
3. **Y. Tang**, A. J. Romanowsky, P. G. van Dokkum, et al., [Testing the Bullet Dwarf Collision Scenario in the NGC 1052 Group Through Morphologies and Stellar Populations](#), 2025, *ApJ*, 978, 21
2. **Y. Tang**, B. Tao, H.-X. Zhang, et al., [Unveiling the Formation of NGC 2915 with MUSE: A Counterrotating Stellar Disk Embedded in a Disordered Gaseous Environment](#), 2022, *A&A*, 668A, 179
1. **Y. Tang**, Q. Chen, H.-X. Zhang, et al., [New Constraints on the Origin of Surface Brightness Profile Breaks of Disk Galaxies from MaNGA](#), 2020, *ApJ*, 897, 79

Contributing-Author Publication:

14. D. Vaz, A. Levitskiy, D. A. Forbes, et al. (including **Y. Tang**), [The Rogue One: A Dark Matter-Dominated Dwarf in the Trail of Dark Matter-Deficient Galaxies](#), 2026, submitted
13. A. Levitskiy, D. A. Forbes, J. S. Gannon, **Y. Tang**, et al., [Diffuse Dwarf Galaxies in Galaxy Clusters: I. Stellar Populations and Radial Gradients](#), 2026, accepted by *MNRAS*

12. M. L. Buzzo, P. G. van Dokkum, M. Hilker, et al. (including **Y. Tang**), [A Twin Set of Dark Matter-Deficient Dwarfs: FCC 224 and FCC 240 as Analogues of NGC 1052-DF2 and DF4](#), 2026, *ApJ*, 1005, 15
11. D. A. Forbes, B. van Heumen, **Y. Tang**, [Revisiting the distance and the globular cluster system of the remarkable galaxy UDG1 in the NGC 5846 group](#), 2026, *MNRAS*, 548, 765
10. D. Martínez-Delgado, A. J. Romanowsky, **Y. Tang**, et al., [A Pearl in the Shell: an ultra-compact dwarf within the tidal debris surrounding spiral galaxy NGC 7531](#), 2026, *A&A*, 708A, 172
9. M. A. Keim, P. G. van Dokkum, Z. Shen, et al. (including **Y. Tang**), [Kinematic Confirmation of a Remarkable Linear Trail of Galaxies in the NGC 1052 Field, Consistent with Formation in a High-Speed Bullet Dwarf Collision](#), 2025, *ApJ*, 988, 165
8. A. J. Romanowsky, **Y. Tang**, K. A. Bundy, et al., [Morphology and Stellar Populations of a Candidate Ultra-diffuse Galaxy in Early Euclid and Rubin Imaging](#), 2025, *RNAAS*, 9, 181
7. T. Li, H.-X. Zhang, W. Lyu, **Y. Tang**, et al., [A Negative Stellar Mass-Gaseous Metallicity Gradient Relation of Dwarf Galaxies Modulated by Stellar Feedback](#), 2025, *A&A*, 698A, 208
6. M. L. Buzzo, D. A. Forbes, A. J. Romanowsky, et al. (including **Y. Tang**), [A New Class of Dark Matter-Free Dwarf Galaxies?. I. Clues from FCC 224, NGC 1052-DF2 and NGC 1052-DF4](#), 2025, *A&A*, 695A, 124
5. W. Lyu, H.-X. Zhang, S. Paudel, et al. (including **Y. Tang**), [Dependence of Metal Enrichment of Nuclear Star Clusters on Galaxy Stellar Mass](#), 2025, *ApJ*, 979, 85
4. A. J. Romanowsky, S. S. Larsen, A. Villaume, et al. (including **Y. Tang**), [Low-density star cluster formation: discovery of a young faint fuzzy on the outskirts of the low-mass spiral galaxy NGC 247](#), 2023, *MNRAS*, 518, 3164
3. G. Chen, H.-X. Zhang, X. Kong, et al. (including **Y. Tang**), [Discovery of a Bimodal Environmental Distribution of Compact Ellipticals in the Local Universe](#), 2022, *ApJL*, 934, L35
2. Y. Yao, H. Liu, X. Kong, et al. (including **Y. Tang**), [Subgalactic Scaling Relations with \$T_e\$ -based Metallicities of Low-metallicity Regions in Galaxies: Metal-poor Gas Inflow May Have Important Effects?](#), 2022, *ApJ*, 926, 57
1. C. J. Agostino, S. Salim, S. M. Faber, et al. (including **Y. Tang**), [Physical Drivers of Emission-line Diversity of SDSS Seyfert 2s and LINERs after Removal of Contributions from Star Formation](#), 2021, *ApJ*, 922, 156