

Chien-Ting J. Chen, Ph.D.

✉ chienting@gmail.com  LinkedIn
 <https://orcid.org/0000-0002-4945-5079>

Professional Summary

X-ray astrophysicist working on supermassive black hole growth, galaxy evolution, and X-ray polarimetry, with over 40 peer-reviewed publications and approximately \$2M in PI-led research funding. Currently Science Operations Lead for NASA's IXPE mission and Vice Chair of the NASA PhysPAG Executive Committee.

Professional Experience

2026 – Present	Senior Scientist , Universities Space Research Association (USRA), NASA MSFC Lead, IXPE Science Operations Center — direct the science program of an operating NASA astrophysics mission, from observation planning through data validation and delivery. Science PI for the HEROIX Astrophysics MidEx mission concept study. Also supports Chandra Project Science and the MSFC X-ray group.
2021 – 2025	Scientist , USRA, NASA MSFC Science operations for IXPE; Chandra Project Science support; science lead for the U.S. archive of SRG/ART-XC data, including a processing pipeline with novel corrections for mirror misalignment identified during verification. Project Scientist for the SuperHERO hard X-ray balloon telescope.
2018 – 2021	Associate Scientist , USRA, NASA MSFC Chandra Project Science and ART-XC calibration and data analysis; extragalactic survey science with X-ray, infrared, and optical observatories.
2015 – 2018	Postdoctoral Scholar , Pennsylvania State University Lead Co-Investigator for the XMM-SERVS multi-year heritage survey; research on obscured supermassive black hole growth and its connection to galaxy evolution.

Education

2009 – 2015	Ph.D. Astrophysics , Dartmouth College
2001 – 2007	M.Sc. Astronomy & B.Sc. Physics , National Tsing Hua University, Taiwan

Research Interests and Expertise

Astrophysics	Active Galactic Nuclei, Galaxy Evolution, Cosmic Surveys, X-ray Polarimetry.
Operations	Mission planning, science operations, data processing pipeline development.
Instrumentation	Calibration and data analysis for X-ray optics and detectors.
Coding	Python, IDL, C, SQL, HTML, CSS, $\text{\LaTeX}$.

Leadership and Service

PhysPAG	Vice Chair, Executive Committee, NASA Physics of the Cosmos PAG (2022–present).
XRSIG	Co-Chair for the PhysPAG X-ray Science Interests Group (2022–present).
Concepts	Supported the Lynx flagship, NewAthena, High Energy X-ray Probe (HEXP), and HEROIX mission concept studies.
Reviewer	Referee for ApJ, ApJS, MNRAS, A&A. Reviewer for NASA Chandra, NuSTAR, Swift, ADAP, and NPP.
Meetings	Chair, Science and Local Organizing Committees, International X-ray Polarimetry Symposium, Huntsville, 2024.
Mentoring	Primary supervisor for two graduate and three undergraduate students; advisory role for >10 junior scientists.

Selected Research Grants and Proposals

PI or lead role; ≈ \$2M in research funding secured.

NuSTAR	Cycle 12 “Broad-band X-ray spectropolarimetry for Fairall 51” (PI, 100 ks)
IXPE	Cycle 3 “First X-ray polarization of the polar-scattered Seyfert 1 Fairall 51” (PI, 1Ms)
APRA	NASA APRA 2023: SuperHERO Hard X-ray Telescope (Project Scientist).
Chandra	Cycle 26: “Resolving multi-phase outflows in a $z=0.615$ massive galaxy” (PI, 30ks + 3 HST orbits).
NuSTAR	Cycle 9: “NuSTAR survey for the SRG/ART-XC NEP catalog” (PI, 300 ks). Cycle 6: “Obscured low-mass AGNs with NuSTAR and Spitzer IRS” (PI, 100 ks).
XMM	Cycle 17 Multi-year Heritage Program: “XMM-SERVS Survey” (lead Co-I, 3.4 Ms).

Selected Publications

- 1 **C.-T. J. Chen**, M. J. Cai, and F. Pacucci, “General Relativistic Shock Wave Solutions with Black Hole Formation: The Singular Isothermal Sphere Case,” *arXiv e-prints*, Jun. 2026, Submitted to ApJ. arXiv: 2606.29607 [astro-ph.HE].
- 2 **C.-T. J. Chen**, I. Liodakis, R. Middei, D. E. Kim, *et al.*, “X-ray and multiwavelength polarization of mrk 501 from 2022 to 2023,” *The Astrophysical Journal*, vol. 974, no. 1, p. 50, Oct. 2024, ISSN: 1538-4357.  DOI: 10.3847/1538-4357/ad63a1.
- 3 S. Ansh, **C.-T. J. Chen**, W. N. Brandt, C. E. Hood, *et al.*, “Nustar observations of a heavily x-ray-obscured agn in the dwarf galaxy j144013+024744,” *The Astrophysical Journal*, vol. 942, no. 2, p. 82, Jan. 2023, ISSN: 1538-4357.  DOI: 10.3847/1538-4357/ac9382.
- 4 **C.-T. J. Chen**, W. N. Brandt, A. E. Reines, G. Lansbury, *et al.*, “Hard x-ray-selected agns in low-mass galaxies from the nustar serendipitous survey,” *The Astrophysical Journal*, vol. 837, no. 1, p. 48, Mar. 2017, ISSN: 1538-4357.  DOI: 10.3847/1538-4357/aa5d5b.
- 5 **C.-T. J. Chen**, R. C. Hickox, A. D. Goulding, D. Stern, *et al.*, “The x-ray and mid-infrared luminosities in luminous type 1 quasars,” *The Astrophysical Journal*, vol. 837, no. 2, p. 145, Mar. 2017, ISSN: 1538-4357.  DOI: 10.3847/1538-4357/837/2/145.
- 6 G. Yang, **C.-T. J. Chen**, F. Vito, W. N. Brandt, *et al.*, “Black Hole Growth Is Mainly Linked to Host-galaxy Stellar Mass Rather Than Star Formation Rate,” *The Astrophysical Journal*, vol. 842, no. 2, p. 72, Jun. 2017.  DOI: 10.3847/1538-4357/aa7564. arXiv: 1704.06658 [astro-ph.HE].
- 7 **C.-T. J. Chen**, R. C. Hickox, S. Alberts, C. M. Harrison, *et al.*, “A connection between obscuration and star formation in luminous quasars,” *The Astrophysical Journal*, vol. 802, no. 1, p. 50, Mar. 2015, ISSN: 1538-4357.  DOI: 10.1088/0004-637x/802/1/50.
- 8 **C.-T. J. Chen**, R. C. Hickox, S. Alberts, M. Brodwin, *et al.*, “A correlation between star formation rate and average black hole accretion in star-forming galaxies,” *The Astrophysical Journal*, vol. 773, no. 1, p. 3, Jul. 2013, ISSN: 1538-4357.  DOI: 10.1088/0004-637x/773/1/3.

Over 40 peer-reviewed publications as first or contributing author, plus over 100 additional publications as part of collaboration teams including the IXPE Science Working Groups, the High Energy X-ray Probe concept study team, and the XMM-SERVS team. Full list: [ADS Library](#).