

Yu-Ching(Tony) Chen | C.V.

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Education

- **University of Illinois at Urbana-Champaign** **Urbana, IL, USA**
PhD student in Astronomy *Aug 2017–Current*
Advisor: Xin Liu
Topic: Searching supermassive binary black holes through multi-wavelength surveys
- **National Taiwan University** **Taipei, Taiwan**
Bachelor of Science (B.S.) in Physics *Sep 2012– Jan 2016*

Research Experience

- **University of Illinois at Urbana-Champaign (UIUC)** *Aug 2016–Current*
Research Assistant
 - Finding unresolved dual AGNs at high redshift using astrometry
 - Supermassive binary black hole candidates discovered from optical variability
 - Study the interstellar environment of Type 1a supernova remnants in Large Magellanic Cloud
- **National Center for Supercomputing Applications(NCSA)** *Aug 2016–May 2019*
Research Assistant
 - Ran and tested the pipeline for nightly and annual processing in the Dark Energy Survey
- **Academia Sinica, Institute of Astronomy and Astrophysics (ASIAA)** *Oct 2014–Jul 2016*
Undergraduate Research Assistant
 - Probed the rho-oph A Region with Submillimeter Array and Atacama Large Millimeter/submillimeter Array
 - Joined the remote operation of Submillimeter Array

Technical and Personal skills

- **Programming Languages:** Python, Shell, C++, ROOT, IDL, SQL, AWK.
- **Radio data reduction and analysis:** Miriad, Mir, CASA.
- **Other:** LINUX, L^AT_EX, Ds9

Awards and Grants

- Center for Astrophysical Surveys (CAPS) Graduate Student Fellowships (2020), \$30000
- Government Scholarship to Study Aboard (2019-2021), Ministry of Education, Taiwan, \$32000
- Student Travel Grant, Conference "Astrophysical Frontiers in the Next Decade", \$500

Successful observing proposals

- **Gemini Observatory**, 2020A: 24.5h (PI), 2.4h (Co-I); 2020B: 3.6h (PI), 3.25h (Co-I)
- **Hubble Space Telescope (HST)**, C28: 14 orbits (Co-I)
- **James Webb Space Telescope (JWST)**, C1: 16.4h (Co-I)
- **Las Cumbres Observatory (LCOGT)**, 2018B: 6h (Co-I) ; 2019A, 4h (Co-I)
- **Submillimeter Array (SMA)**, 2015B: 1 track (PI)
- **Vary Large Array (VLA)**, 2020A: 15h (Co-I); 2020B: 29h (Co-I)
- **Vary Long Baseline Array (VLBA)**, 2020A: 32.2h (Co-I)

Publications

NASA/ADS List

First-Author.....

1. **Chen, Y.-C.**, Hwang, H.-C., Shen, Y., et al., "*Varstrometry for Off-nucleus and Dual sub-Kpc AGN (VODKA): Hubble Space Telescope Discovers Double Quasars*", [Submitted to ApJ](#), [arXiv:2108.01672](#)
2. **Chen, Y.-C.**, Liu, X., Liao, W.-T., Guo, H., "*Very Large Array imaging rules out precessing radio jets in three DES–SDSS-selected candidate periodic quasars*", [Submitted to MNRAS](#), [arXiv:2105.15194](#)
3. **Chen, Y.-C.**, Liu, X., Liao, W.-T., et al. (DES Collaboration), "*Candidate Periodically Variable Quasars from the Dark Energy Survey and the Sloan Digital Sky Survey*", 2020, [MNRAS](#), **499**, 2245
4. **Chen, Y.-C.**, Hirano, N., "*The Physical and Chemical Properties of the ρ Ophiuchi A Dense Core*", 2018, [ApJ](#), **868**, 80

Contributed.....

1. Burke, C. J., Liu, X., Chen, **Chen, Y.-C.**, et al. "*On the AGN nature of broad balmer emission in four low-redshift metal-poor galaxies*", 2021, [MNRAS](#), **504**, 543
2. Shen, Y., **Chen, Y.-C.**, Hwang, H.-C., et al. "*A hidden population of high-redshift double quasars unveiled by astrometry*", 2021, [Nature Astronomy](#), **5**, 569
3. Liao, W.-T., **Chen, Y.-C.**, Liu, X., Holgado, A. M., Guo, H., et al. (DES Collaboration), "*A candidate binary black hole in a periodic quasar from circumbinary accretion variability*", 2021, [MNRAS](#), **500**, 4025
4. Burke, C. J., Shen, Y., **Chen, Y.-C.**, et al., "*Optical Variability of the Dwarf AGN NGC 4395 from the Transiting Exoplanet Survey Satellite*", 2020, [ApJ](#), **899**, 136
5. Guo, H., Burke, C. J., Liu, X., Phadke, K. A., Zhang, K., **Chen, Y.-C.**, et al. (DES Collaboration), "*Dark Energy Survey Identification of A Low-Mass ActiveGalactic Nucleus at Redshift 0.823 from Optical Variability*", 2020, [MNRAS](#), **496**, 3636
6. Yang, Q., Shen, Y., **Chen, Y.-C.**, et al., "*Spectral variability of a sample of extreme variability quasars and implications for the Mg II broad-line region*", 2020, [MNRAS](#), **493**, 5773
7. Burke, C. J., Aleo, P. D., **Chen, Y.-C.**, et al., "*Deblending and classifying astronomical sources with Mask R-CNN deep learning*", 2019, [MNRAS](#), **490**, 3952
8. Morganson, E., Gruendl, R. A., Menanteau, F., Carrasco Kind, M., **Chen, Y.-C.**, et al. (DES Collaboration) "*The Dark Energy Survey Image Processing Pipeline*", 2018, [PASP](#), **130**, 74501