

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

✉ ycchen@illinois.edu • ORCID

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 optical time-domain 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

- Government Scholarship to Study Aboard (2019-2021), Ministry of Education, Taiwan, \$32000
- Student Travel Grant, Conference "Astrophysical Frontiers in the Next Decade", \$500

Successful proposals

- **Submillimeter Array (SMA)**, "*Probing the protostar candidate in ρ oph A region with H_2CO and CH_3OH* ", 1 track, 2015B, PI
- **Las Cumbres Observatory (LCOGT)**, "*LCOGT monitoring of a candidate binary supermassive black hole in a periodic quasar from circumbinary accretion variability*", 6+4 hours, 2019A, 2018B, Co-I
- **Gemini Observatory**, "*Searching kpc dual AGNs at higher redshift*", 24.5 hours, 2020A, PI
- **Gemini Observatory**, "*Discovery of Close Dual Binary/Lensed Quasars from Gaia Astrometry and HST Imaging*", 2.4 hours, 2020A, Co-I
- **Vary Large Array (VLA)**, "*VLA Discovery of Dual and Lensed Quasars from Gaia Astrometry and HST Imaging*", 24 hours, 2020B, Co-I

Publications

First-Author.....

1. **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*", [Submitted to MNRAS](#)
2. **Chen, Y.-C.**, Hirano, N., "*The Physical and Chemical Properties of the ρ Ophiuchi A Dense Core*", 2018, [ApJ](#), 868, 80

Contributed.....

1. 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*", [Submitted to MNRAS](#)
2. Burke, C. J., Shen, Y., **Chen, Y.-C.**, et al., "*Optical Variability of the Dwarf AGN NGC 4395 from the Transiting Exoplanet Survey Satellite*", [Submitted to ApJ](#)
3. 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*", [Submitted to MNRAS](#)
4. 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
5. 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
6. 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