THARINDU JAYASINGHE

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EDUCATION

2017–now	**Ohio State University,** Columbus, OH Ph.D. in Astronomy, expected July 2022 M.S. in Astronomy, 2020
2015–2017	**Cal Poly Pomona,** Pomona, CA B.S. in Physics, 2017 Graduated *summa cum laude*
2013–2015	**John F. Kennedy University,** Pleasant Hill, CA

FELLOWSHIPS AND AWARDS

2020	Presidential Fellowship, Ohio State University
2020	Allan Markowitz Graduate Award in Observational Astronomy, Department of Astronomy, Ohio State University
2020	Ann S. Tuttle Graduate Student Paper Prize, Department of Astronomy, Ohio State University
2020	Finalist, Two Sigma Data Science PhD Fellowship
2019	Chambliss Astronomy Achievement Student Award, American Astronomical Society
2017	University Fellowship for Graduate Studies, Ohio State University
2017	Julian A. McPhee Award, Class of 2017, Cal Poly Pomona
2017	Valedictorian, College of Science, Class of 2017, Cal Poly Pomona
2017	FAMOUS travel grant, American Astronomical Society
2016–2017	Outlaws of Physics Scholarship, Cal Poly Pomona
2015	Most outstanding undergraduate student, John F. Kennedy University

SELECTED PROPOSALS AND RESEARCH SUPPORT

2020-2021 **PI:** "A Search for Non-Interacting Black Hole-Giant Star Binary Systems"
Large Binocular Telescope/PEPSI, 38 hours from 2020B-2021B

2021 **Co-I:** "Testing the Existence of a $3\ M_{\odot}$ Dark Companion to V723 Mon" (PI: C. S. Kochanek)
Hubble Space Telescope, 2 orbits in cycle 29

2020 **Co-I:** "A Search for Compact Stellar Remnants using Kepler, APOGEE and ASAS-SN" (PI: D. Huber)
Keck Observatory/HIRES, 1 night in 2020B

2021 **Named Participant:** "The All-Sky Automated Survey for Supernovae"
Gordon and Betty Moore Foundation Grant ($1.5 million, GBMF10501, PI: K. Z. Stanek, C.S. Kochanek)

2021 **Named Participant:** "The All-Sky Automated Survey for Supernovae"
Sloan Foundation Grant ($1.5 million, G202114192, PI: K. Z. Stanek, C.S. Kochanek)

2021 **Named Participant:** "Increasing The Impact Of TESS With The All-Sky Automated Survey For Supernovae"
TESS Guest Investigator program (G04174, PI: C. S. Kochanek)

2019 **Named Participant:** "All-Sky Automated Survey for Supernovae in the Era of Multi-Messenger Astrophysics"
National Science Foundation Grant (AST-1908570, PI: K. Z. Stanek)
Joint with NSF Grant AST-1908952 (PI: B. J. Shappee)

PROGRAMMING EXPERIENCE

- Programming languages: Python, C++
- Database management: ADQL, SQL, MongoDB

SERVICE AND OUTREACH

- Project Lead, Citizen ASAS-SN, hosted by the Zooniverse
- Technical Lead, The Milky Way Project, hosted by the Zooniverse

PROFESSIONAL ACTIVITIES

2017 – Referee for *Publications of the Astronomical Society of Japan, The Astrophysical Journal, Publications of the Astronomical Society of Australia* and *Astronomy and Astrophysics*
2020 – Full Member, Sigma Xi
2017 – Member, American Astronomical Society

PUBLICATIONS

Summary: 28 total refereed, 11 first author, 9 with significant contribution.
670+ citations, h-index: 12

Submitted (1 total)

1. Way, Z. S., **Jayasinghe, T.** et al. 2021, "*Discovery of a Highly Eccentric, Chromospherically Active Binary: ASASSN-V J192114.84+624950.8*", Submitted to *MNRAS*, arXiv: 2109.07586

Accepted/Published (27 total, 11 first author)

First author

11. **Jayasinghe, T.** et al. 2021, "*The Loudest Stellar Heartbeat: Characterizing the most extreme amplitude heartbeat star system*", *MNRAS*, 506, 4083

10. **Jayasinghe, T.** et al. 2021, "*A Unicorn in Monoceros: the 3 $M_\odot$ dark companion to the bright, nearby red giant V723 Mon is a non-interacting, mass-gap black hole candidate*", *MNRAS*, 504, 2577

9. **Jayasinghe, T.** et al. 2021, "*The ASAS-SN Catalog of Variable Stars IX: The Spectroscopic Properties of Galactic Variable Stars*", *MNRAS*, 503, 200

8. **Jayasinghe, T.** et al. 2020, "*The ASAS-SN Catalog of Variable Stars VII: Contact Binaries are Different Above and Below the Kraft Break*", *MNRAS*, 493, 4045

7. **Jayasinghe, T.** et al. 2020, "*The ASAS-SN Catalog of Variable Stars VI: An All-Sky Sample of δ Scuti Stars*", *MNRAS*, 493, 4186

6. **Jayasinghe, T.** et al. 2020, "*The ASAS-SN catalogue of variable stars - V. Variables in the Southern hemisphere*", *MNRAS*, 491, 13

5. **Jayasinghe, T.** et al. 2019, "*An extreme amplitude, massive heartbeat system in the LMC characterized using ASAS-SN and TESS*", *MNRAS*, 489, 4705

4. **Jayasinghe, T.** et al. 2019, "*The Milky Way Project second data release: bubbles and bow shocks*", MNRAS, 488, 1141

3. **Jayasinghe, T.** et al. 2019, "*The ASAS-SN catalogue of variable stars - II. Uniform classification of 412 000 known variables*", MNRAS, 486, 1907

2. **Jayasinghe, T.** et al. 2019, "*The ASAS-SN catalogue of variable stars III: variables in the southern TESS continuous viewing zone*", MNRAS, 485, 961

1. **Jayasinghe, T.** et al. 2018, "*The ASAS-SN catalogue of variable stars I: The Serendipitous Survey*", MNRAS, 477, 3145

Co-author

16. Neustadt, J. M. M., et al. 2021, "*The search for failed supernovae with the Large Binocular Telescope: a new candidate and the failed SN fraction with 11 yr of data*", MNRAS, in press

15. Rowan D. M., Stanek K. Z., **Jayasinghe T.** et al. 2021, "High Tide: A Systematic Search for Ellipsoidal Variables in ASAS-SN", MNRAS, 507, 104

14. Mishra, H. et al. 2021, "*The Changing Look Blazar B2 1420+32*", ApJ, 913 ,146

13. Inno, L. et al. 2021, "*The Gaia-ASAS-SN classical Cepheids sample: I. Sample Selection*", ApJ, 914 ,127

12. Kawash, A. et al. 2021, "*Classical Novae Masquerading as Dwarf Novae? Outburst Properties of Cataclysmic Variables with ASAS-SN*", ApJ, 910, 120

11. Wolf-Chase, G. et al. 2021, "*The Milky Way Project: Probing Star Formation with First Results on Yellowballs from DR2*", ApJ, 911, 28

10. O'Grady, A. J. G., et al. 2020, "*Cool, Luminous, and Highly Variable Stars in the Magellanic Clouds from ASAS-SN: Implications for Thorne-Żytkow Objects and Super-Asymptotic Giant Branch Stars*", ApJ, 901, 135

9. Zang, W. et al. 2020, *"Spitzer +VLTI-GRAVITY Measure the Lens Mass of a Nearby Microlensing Event"*, ApJ, 897, 180

8. Bredall, J. W. et al. 2020, "*The ASAS-SN Catalog of Variable Stars VIII: "Dipper" Stars in the Lupus Star-Forming Region*", MNRAS, 496, 3257

7. Thompson, T. A. et al. 2020, "*Response to Comment on "A noninteracting low-mass black hole–giant star binary system" "*, Science, 368, 6491

6. Rodriguez Martinez, R. et al. 2019, *"A Catalog of M-dwarf Flares with ASAS-SN"*, ApJ, 892, 144

5. Thompson, T. A. et al. 2019, "*A noninteracting low-mass black hole–giant star binary system*", Science, 366, 637

4. Holoien, T. W.-S. et al. 2019, "*The ASAS-SN Bright Supernova Catalog – IV. 2017*", MNRAS, 484, 1899

3. Rodriguez, J. E. et al. 2019, "*KELT-24b: A 5M_J Planet on a 5.6 day Well-Aligned Orbit Around the Young V=8.3 F-star HD 93148*", AJ, 158, 197

2. Pawlak, M. et al. 2019, "*The ASAS-SN Catalog of Variable Stars IV: Periodic Variables in the APOGEE Survey*", MNRAS, 487, 5932

1. Shields, J. V, **Jayasinghe, T.** et al. 2018, "*An All-Sky Search for R Coronae Borealis Stars in ASAS-SN*", MNRAS, 483, 4470

Research Notes

6. **Jayasinghe, T.** et al. 2018, "*ASAS-SN Identification of FY Sct as a Detached Eclipsing Binary System with a ∼2.6 Years Period*", RNAAS, 2, 181

5. **Jayasinghe, T.** et al. 2021, "*ASAS-SN Identification of a Detached Eclipsing Binary System with a ∼7.3 Year Period*", RNAAS, 2, 125

4. **Jayasinghe, T.** et al. 2018, "*ASAS-SN Discovery of 4880 Bright RR Lyrae Variable Stars*", RNAAS, 2, 18

3. Rowan, D. M. et al. 2021, "*ASASSN-21co: A Detached Eclipsing Binary with an 11.9 yr Period*", RNAAS, 5, 147

2. Christy, C. T., **Jayasinghe, T.,** et al. 2021, "*Citizen ASAS-SN: Citizen Science with The All-Sky Automated Survey for SuperNovae (ASAS-SN)*", RNAAS, 5, 38

1. Rodriguez Martinez, R., Schmidt S. J., **Jayasinghe, T.** et al. 2018, "*ASASSN-18di: Discovery of a Powerful Flare on a Mid-M Dwarf*", RNAAS, 2, 8

Other non-refereed Publications, Circulars, and Telegrams

34 ATels, including 19 first author, with 26+ citations

INVITED TALKS

5. "*Searching for the quietest compact objects in the Milky Way*"
Ball State University Astronomy Colloquium (2021, Oct.)

4. "*Searching for the quietest compact objects in the Milky Way*"
UC Berkeley Theoretical Astrophysics Center (TAC) seminar (2021, Sep.)

3. "*The Unicorn: Discovery of a nearby, mass gap black hole candidate*"
   Ohio State University CCAPP Seminar (2021, Sep.)

2. "*Looking for a unicorn: Discovery of a nearby, mass gap black hole candidate*"
   Talk presented at the TESS Science Conference II (2021, Aug.)

1. "*A Data-Driven Approach to the Variable Universe through the All-Sky Automated Survey for Supernovae*",
   Public Talk hosted by the IEEE Young Professionals Sri Lanka (2020, Jul.)

CONFERENCE PROCEEDINGS AND CONTRIBUTED TALKS

8. **Jayasinghe, T.**, "*A search for non-interacting compact object binaries with APOGEE and ASAS-SN*", Talk presented at AAS 237 (2021, Jan.)

7. **Jayasinghe, T.**, "*Searching for compact objects around red giants: Synergies between APOGEE and ASAS-SN*", Talk presented at an APOGEE science meeting (2020, Oct.)

6. **Jayasinghe, T.**, Stanek K. Z., Kochanek C. S., "*Constructing an all-sky catalog of bright variable stars with ASAS-SN*", Poster presented at AAS 231 (2019, Jan.)

5. **Jayasinghe, T.**, et al., "*The Milky Way Project: Probing Star Formation with a New Yellowball Catalog*", Poster presented at AAS 231 (2019, Jan.)

4. **Jayasinghe, T.**, Povich M.S. & Dixon D., "*The Milky Way Project: Mapping star formation in our home Galaxy, one click at a time*", Poster presented at AAS 229 (2017, Jan.)

3. Dixon, D. M, **Jayasinghe, T.** & Povich M. S., "*The Milky Way Project: A Citizen Science Catalog of Infrared Bow Shock Nebulae*", Poster presented at AAS 229 (2017, Jan.)

2. **Jayasinghe, T.**, Povich M. S. and the Milky Way Project team, "*The Milky Way Project: Mapping the Milky Way through Citizen Science*", Talk presented at the CAMPARE Research Symposium (2016, Aug.)

1. **Jayasinghe, T.**, Povich M. S. and the Milky Way Project team, "*The Milky Way Project: Mapping the Milky Way through Citizen Science*", Talk presented at the Cal Poly Pomona Creative Activities Research Symposium (2016, Jul.)

MENTORING EXPERIENCE

- Graduate mentor to new graduate students at OSU astronomy
- Research mentor to:
    - Noah Bungart (OSU SURP Summer 2021 REU student)
    - Collin Christy (OSU SURP Summer 2020 REU + ASAS-SN Analyst)
    - Zachary Way (ASAS-SN Analyst → Graduate student at GSU)
    - Joshua Shields (ASAS-SN Analyst → Graduate student at MSU)

SELECTED COVERAGE BY POPULAR PRESS

8. *Where Are All the Tiny Black Holes?*
   The Atlantic (2021).
   https://www.theatlantic.com/science/archive/2021/01/tiny-black-holes-mass-gap/617866/

7. *Newfound black hole may be the closest to Earth*
   National Geographic (2021).
   https://www.nationalgeographic.com/science/article/newfound-black-hole-may-be-the-closest-to-earth

6. *A black hole dubbed 'the Unicorn' may be galaxy's smallest one*
   Reuters (2021).
   https://www.reuters.com/lifestyle/science/black-hole-dubbed-the-unicorn-may-be-galaxys-smallest-one-2021-04-22/

5. *The Tiniest Black Hole In The Milky Way Was Right There All Along*
   Forbes (2021).
   https://www.forbes.com/sites/startswithabang/2021/04/14/the-tiniest-black-hole-in-the-milky-way-was-right-there-all-along

4. *Scientists may just have discovered a new class of black holes*
   The Ohio State University (2019).
   https://news.osu.edu/scientists-may-just-have-discovered-a-new-class-of-black-holes/

3. *Spitzer Spots a Starry Region Bursting With Bubbles*
   NASA (2019).
   https://www.nasa.gov/feature/jpl/spitzer-spots-a-starry-region-bursting-with-bubbles

2. *A weird star just rapidly dimmed for a few days and we don't know why*
   New Scientist (2019).
   https://www.newscientist.com/article/2205725-a-weird-star-just-rapidly-dimmed-for-a-few-days-and-we-dont-know-why/

1. *'Milky Way Project' Relaunches Citizen Science Website*
   JPL- Spitzer (2016).
   http://www.spitzer.caltech.edu/news/1907-feature16-16--Milky-Way-Project-Relaunches-Citizen-Science-Website

REFERENCES

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