

# Kristen Dage

## Curriculum Vitæ

Graduate Student  
Dept. of Physics and Astronomy  
Michigan State University  
East Lansing, MI 48824

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<https://kcdage.github.io/>

### Education

- 2015 - present Ph.D. Astronomy and Astrophysics  
Michigan State University, East Lansing, MI  
Advisor: S.E. Zepf
- 2015 - 2017 M.S. Astronomy and Astrophysics  
Michigan State University, East Lansing, MI
- 2012 - 2014 B.S. Physics  
University of Michigan-Dearborn, Dearborn MI

### Teaching and Mentoring Experience

- 2018- Working with MSU undergraduate Omid Noroozi searching for long and short term variability of ultraluminous X-ray sources in globular clusters.
- 2015 - 2018 Teaching Assistant  
ISP 205L - Visions of the Universe  
Michigan State University, East Lansing, MI
- 2011 - 2014 Math, Physical Sciences Tutor  
Academic Support Center  
Oakland Community College, Farmington Hills, MI

### Accepted Proposals and Grants

- 2019 AAS International Travel Grant
- 2018 Chandra Cycle 20: *"The Nature of the Two Globular Cluster ULXs in the Galaxy NGC 4472"*. Awarded 90 ks time.

### Professional Presentations

#### Talks

- 2019 Mar Compact Objects in Michigan 7 (Detroit, MI), Contrib. Talk
- 2019 Mar 17th HEAD meeting (Monterey, CA), Contrib. Talk
- 2019 Jan Michigan State University (East Lansing, MI), Seminar Talk
- 2018 Aug International Centre for Radio Astronomy Research (Perth, Australia), Colloquium Talk
- 2018 Apr Compact Objects in Michigan 6 (Ann Arbor, MI), Contrib. Talk
- 2017 Mar Compact Objects in Michigan 5 (East Lansing, MI), Contrib. Talk
- 2017 Feb Gemini South Observatory, (La Serena, Chile), Colloquium Talk
- 2014 Apr Compact Objects in Michigan 2 (East Lansing, MI), Contrib. Talk

#### Posters

- 2018 Aug Chandra Accretion Workshop (Cambridge, MA)
- 2018 Mar HEAD Special Meeting on High Energy Astrophysics in the 2020s and Beyond (Rosemont, IL), [Poster](#)
- 2017 Jan 229th American Astronomical Society meeting (Grapevine, TX)
- 2014 Nov Annual Physics Undergrad Research Conference at Wayne State University (Detroit, MI)
- 2014 Jun 218th American Astronomical Society meeting (Boston, MA), [Poster](#)

## Outreach

- 2019 Event co-Supervisor, Science Olympiad State levels divisions B (Solar System) and C (Astronomy), East Lansing, MI
- 2019 MSU Science Festival Expo Days (Primary Astronomy Organizer), East Lansing, MI
- 2019 Organized an [event](#) in response to the IAU Women and Girls in Astronomy Month at MSU's Abrams Planetarium, East Lansing, MI
- 2019 Volunteer for [CUWiP \(Conference for Undergraduate Women in Physics\)](#) hosted at MSU, East Lansing, MI
- 2018 Volunteer at MSU Observatory's Nature Night, East Lansing, MI
- 2018 Public talk on "History of Astronomy" for Astronomy on Tap, Lansing MI ([slides](#))
- 2018 MSU Science Festival Expo Days (Primary Astronomy Organizer), East Lansing, MI
- 2017 Public talk for Capital Area Astronomy Association, East Lansing, MI
- 2017 Public talk on "Observing in Chile" for Astronomy on Tap, Lansing MI
- 2016 Volunteer at MSU Science Festival Expo Days, East Lansing, MI
- 2015 Volunteer, Science Exploration Days, Dearborn, MI
- 2014 Volunteer, Science Olympiad Regional levels division B (Solar System), Dearborn, MI

## Other

- 2018 Certificate in Inclusive Inquiry STEM Education from the [Institute for Scientist & Engineer Educators Professional Development Program \(ISEE PDP\)](#), Santa Cruz, CA.
- 2018 Astronomy Instructor - GUPPY (Gifted University for Parents and Precocious Youth) Designed curriculum and instructed a class for 5th-6th graders through MSU's Gifted and Talented Education program. (June 30-July 1), East Lansing, MI.
- 2017-2018 Mentor for REU students and incoming graduate students through MSU's WAMPS (Women and Minorities in Physical Sciences), East Lansing, MI.
- 2016- Organizer of MSU Astronomy group journal discussion, East Lansing, MI.
- 2014 Outstanding Physics Student *Dept. Natural Sciences, University of Michigan-Dearborn*
- 2014 English Translation (from German) of Boltzmann's "[Analytical Proof of the Second Law of Thermodynamics from the Basis of the Conservation of Total Energy](#)", under the supervision of Dr. Jeffrey Prentis (Natural Sciences Dept.) and Dr. Jacqueline Vansant (German Dept.), University of Michigan-Dearborn, Dearborn, MI.
- 2013 Participated in [CUREA \(Consortium for Undergraduate Research and Education in Astronomy\)](#), with a research project on sunspots using one of the historic solar telescopes on Mount Wilson Observatory in the San Gabriel Mountains.
- 2012-2014 Undergraduate Research with Dr. Will Clarkson, which ultimately resulted in our 2018 publication "[A Search for Spin-Superorbital Period Correlation in SMC X-1](#)", University of Michigan-Dearborn, Dearborn, MI.
- 2011 Certificate in Bird Biology from the Cornell Lab of Ornithology

## Analysis and Software

- X-ray spectroscopy, imaging and timing analysis (*Chandra*, *XMM-Newton*, *RXTE/ASM*, *Swift/BAT*, *MAXI*)
- Optical spectroscopy analysis (*SOAR/GHTS*, *Gemini/GMOS*, *VLT/FORS2*)
- Ultraviolet imaging and photometry (*Swift/UVOT*)
- Infrared imaging (*Spitzer/IRAC*)
- Conducting optical observations (*SOAR* observatory)
- Programming: Python, Mathematica
- Major astronomical packages: AstroPy, CIAO, HEASoft (XSpec, FTools), IRAF

## Publications

### Refereed

1. **K. C. Dage**, S. E. Zepf, A. Bahramian, A. Kundu, T. J. Maccarone, M. B. Peacock, “*X-Ray Variability from the Ultraluminous Black Hole Candidate X-ray Binary in the Globular Cluster RZ 2109*”, 2018, [ApJ](#), [Accepted](#).
2. **K.C. Dage**, W.I. Clarkson, P.A. Charles, S. Laycock, I-C. Shih “*A Search for Spin-Superorbital Period Correlation in SMC X-1*”, 2018, [MNRAS](#), [accepted](#).
3. M. A. Tucker, **et al** “*ASASSN-18ey: The Rise of a New Black-Hole X-ray Binary*” 2018, [ApJ](#), [Accepted](#).
4. Strader, J.; **et al** “*Optical spectroscopy and demographics of redback millisecond pulsar binaries*”, 2018, [ApJ](#), [Accepted](#).
5. **K.C. Dage**, S.E. Zepf, M.B. Peacock, A. Bahramian, O. Noroozi, A.Kundu, T.J. Maccarone, “*X-Ray Spectral Variability of Ultraluminous X-Ray Sources in Extragalactic Globular Clusters*”, 2019 [MNRAS](#), [accepted](#).
6. E. Aydi, **et al** “*Flaring, Dust Formation, And Shocks In The Very Slow Nova ASASSN-17pf (LMCN 2017-11a)*”, 2019, [submitted](#)

### Unrefereed

1. **K Dage**, S.E. Zepf, J. Strader, G. Dimitriadis, R. J. Foley, C. D. Kilpatrick, D. O. Jones, C. Rojas-Bravo, “*Spectroscopic Classification of SN 2018agk with SOAR/Goodman*”, 2018, The Astronomer’s Telegram, No. 11433
2. A. Bahramian, J. Strader, **K Dage.**, “*SOAR/Goodman optical spectroscopy of MAXI J1820+070*”, 2018, The Astronomer’s Telegram, No. 11424
3. K. V. Sokolovsky, J. Strader, **K. Dage**, L. Shishkovsky, E. Aydi, L. Chomiuk, A. Kawash, K. Z. Stanek, C. S. Kochanek, J. V. Shields, T. A. Thompson, B. J. Shappee, T. W.-S. Holoien, J. L. Prieto, Subo Dong , M. Stritzinger, “*ASAS-SN Discovery of a Bright Candidate Microlensing Event ASASSN-19cq*”, 2019, The Astronomer’s Telegram, No. 12495