Sumit K. Sarbadhicary – Curriculum Vitae

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RESEARCH INTERESTS

Supernovae: progenitors of Ia and core-collapse, supernova remnants
Galaxy Evolution: interstellar medium, stellar populations, supernova feedback, cosmic rays.
Stellar Evolution: RR Lyrae, Cepheids, MESA.
Radio Astronomy: radio light curves, interferometric observations

EDUCATION

2014-present PhD, Astronomy - University of Pittsburgh
Advisors: Carles Badenes (Pitt) & Laura Chomiuk (Michigan St.)
Thesis: *The Origin of Stellar Species: Constraining Stellar Evolution with Local Group galaxy surveys*

2012-2014 M.S., Astronomy
University of Pittsburgh

2008-2012 B.S., Physics (Astronomy conc.)
Louisiana State University

TALKS/POSTERS

- *Transients Meeting*, Northwestern University, 2017, contributed talk
- *Astro Tuesday Series*, University of Chicago, 2017, seminar talk
- *Extreme Astrophysics Seminar*, University of Michigan, 2017, seminar talk
- *NOAO Friday Scientific Lunch Talks*, National Optical Astronomy Observatory, 2017, seminar talk
- *Astronomy Seminar*, University of Washington, Seattle, 2017, seminar talk
- *CCAPP Astro-particle Lunch*, Ohio State University, 2017, invited talk
- *Developing the ngVLA Science Program Workshop*, Socorro, New Mexico, poster, 2017
- *FOE17: Fifty-One-Erg*, Oregon State University, contributed talk, 2017
- *Supernova Remnants workshop*, University of California, Santa Cruz, invited talk, 2017
- *Supernova Remnants: An Odyssey in Space after Stellar Death*, Greece, contributed talk+poster, 2016
- *Astrolunch* seminar, University of Pittsburgh, invited talk, April 2016.
- *Local Group Astrostatistics*, University of Michigan, poster, June 2015.
- *Astrostatistics seminar*, Carnegie Mellon University, invited talk, Feb 2015.
- *Neighborhood Workshop in Astrophysics and Cosmology II*, Pennsylvania State University, contributed talk, April 2014.

PROFESSIONAL EXPERIENCE

- Founder and coordinator of the weekly *Pitt-CMU Astrosnacks* seminars (2014-present).
- Student representative of 2016 Astrophysics Faculty Search Committee, University of Pittsburgh
- Participant, 2014, *Summer School in Statistics for Astronomers*, Pennsylvania State University

- Participant, 2014, *SciCoder*, New York University,
- Participant, 2016, *Gas on top of Quasars*, University of Pittsburgh
- Participant, 2016, *Preparing for Supernova Science in the LSST Era*, University of Pittsburgh
- Participant, 2017, *Eta Carinae, LBV and Supernova Imposters*, University of Pittsburgh

HONORS AND AWARDS

- 2017 Andrew Mellon Pre-doctoral Fellowship
- 2016 Thomas-Lain Scholarship
- 2014 Best Speaker Award (shared w. Amanda Yoho out of 48 speakers), Neighborhood Workshop in Astrophysics and Cosmology, Pennsylvania State University
- 2008-12 LSU Golden Oak Scholarship

MENTORING

- Mairead Heger, undergraduate, University of Pittsburgh

TEACHING

- April 2016: Guest lecturer, Galactic & Extra-galactic Astronomy, ASTRON 3580. (Instructor: C. Badenes).
- Sep-Dec, 2013: Teaching Assistant, Stars, Galaxies and Cosmos, ASTRON 89 (Instructor: M. Wood-Vasey)
- June-July 2013: Teaching Assistant, Stars, Galaxies and Cosmos, ASTRON 89 (Instructor: D. Turnshek)
- Jan-April 2013: Teaching Assistant, Basics of Space Flight, ASTRON 87 (Instructor: R. S. Ladbeck)
- Sep-Dec 2012: Teaching Assistant, Basic Physics for Science and Engineering I, PHYS 174 (Instructor: B. D'urso)
- Sep-Dec 2012: Grader, Physics and Society, PHYS 87, (Instructor: E. Gerjuoy)

OUTREACH

- 2017: Presenter: *Investing Now* (for students from historically under-represented groups in STEM fields), University of Pittsburgh
- 2015-18: Organizer: Career development seminars at Dept of Physics & Astronomy, University of Pittsburgh
- 2016: Telescope operator/presenter: White House Frontiers Conference Astronomy Night at Alleghany Observatory, Pittsburgh, PA.
- 2012: Presenter: Open-house nights at Landolt Astronomical Observatory, Baton Rouge, LA.
- 2011: Presenter: Louisiana Junior Science and Humanities Symposium (for high-school students), Baton Rouge, LA

REFERENCES

Prof. Carles Badenes (University of Pittsburgh) - badenes@pitt.edu
Prof. Laura Chomiuk (Michigan State University) - chomiuk@pa.msu.edu
Prof. Enrico Ramirez-Ruiz (University of California, Santa Cruz) - enrico@ucolick.org
Prof. Damiano Caprioli (University of Chicago) - caprioli@uchicago.edu

Sumit K. Sarbadhicary – Publication List

Published/Submitted

1. **Sarbadhicary, S., K.**, Chomiuk L., Badenes C., Tremou, Evangelia, Soderberg, A. M., Sjouwerman L., *The two most recent thermonuclear supernovae in the Local Group: Radio constraints on the progenitors and evolution*, 2017, submitted to ApJ, arXiv:1709.05346

2. **Sarbadhicary, S. K.**, Badenes C., Chomiuk L., Caprioli D., Huizenga D., *Supernova Remnants in the Local Group I: A model for the radio luminosity function and visibility times of supernova remnants*, 2017, MNRAS, 464, 2326. [Citations: 7]

3. Launey, K. D., **Sarbadhicary, S. K.**, Dytrych P., Draayer J. P., *Program in C for studying characteristic properties of two-body interactions in the framework of spectral distribution theory*, 2014, Computer Physics Communications, 185, 284 [Citations: 3]

To be submitted

1. **Sarbadhicary, S. K.**, Badenes C., Ciardullo, R., Maoz, D., Mateu, C., & Heger M., *Putting stellar evolution to the test I: The delay-time distribution of RR Lyrae*, 2017, to be submitted to ApJ

2. **Sarbadhicary, S. K.**, Badenes C., Ciardullo, R., Maoz, D., Newman, J. M., & Heger M., *Putting stellar evolution to the test II: The delay-time distribution of Cepheids*, 2017, to be submitted to ApJ

3. **Sarbadhicary, S. K.**, Ramirez-Ruiz, E., & Badenes C. *Maps of momentum feedback from Supernova Remnants in the Local Group*, 2017, to be submitted to ApJL

4. Chomiuk L., Huizenga, D., Badenes C. & **Sarbadhicary, S. K.**, *A VLA Radio-continuum selected survey of supernova remnants in the LMC*, 2017, to be submitted to ApJ

5. Rane A., Zhang B., Lorimer D. R., Newman J. A., Ponder K. A., & **Sarbadhicary, S. K.**, *Empirical Population Models for Fast Radio Bursts, 2017*, to be submitted to ApJ