

Adric R. Riedel

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Postdoctoral Researcher
The College of Staten Island, The City University of New York
Educator
The American Museum of Natural History

Education:

2012 PhD in Astronomy
Georgia State University, Atlanta, GA
Adviser: Todd J. Henry

2009 Masters of Science in Physics
Georgia State University, Atlanta, GA
Adviser: Todd J. Henry

2006 Bachelor's of Science in Astronomy and Astrophysics
Villanova University, Villanova, PA
Undergraduate Adviser: Edward F. Guinan

Research interests:

Local Galactic kinematics, low-mass stars, brown dwarfs, nearby stars, spectroscopy, astrometry, scientific visualizations.

Awards:

2012 Outstanding Advanced Graduate Student, Astronomy
2011 Doxsey Prize, American Astronomical Society
2009 Outstanding Second-Year Graduate Student, Astronomy
2006 Mendel Medal in Astronomy and Astrophysics
2005 Delaware Space Grant
2002 Edwin F. Bailey Award for Excellence

Service:

2012-present Scientific advising of undergraduates and a high school student in CUNY's BDNYC research group, organization and leading a semi-weekly journal club for the graduate students, and writing club for senior group members.
2009-2012 SMARTS (Small and Moderate Aperture Research Telescope System) Fellow.
Observation coordinator of the CTIO 0.9m telescope, responsible for interfacing

- between onsite staff and the astronomical community, observing program maintenance and vetting, and data retrieval.
- 2010-2012 Mentoring, advising and scientific instruction of three undergraduate students at GSU.

Teaching experience:

- 2013-present Instructor for the AMNH Lang Summer Science program
- 2013 Lab Instructor in Introductory Astronomy at Borough of Manhattan Community College
- 2012-present Astronomy Instructor in the AMNH Science and Research Mentoring Program
- 2006-2009 Lab instructor in Introductory Astronomy at Georgia State University
- 2003-2006 Lab instructor in Introductory Astronomy at Villanova University

Invited Colloquia:

- 2013 Université de Montreal Groupe D'Astrophysique
- 2013 State University of New York at Stony Brook, Department of Physics and Astronomy.

Educational/Outreach activities:

- 2014 Developed 3D movie of dust layers on brown dwarfs for the BDNYC group (<http://www.bdnyc.org>)
- 2014 Developed 3D movie of the 25 parsec database for the RECONS group (<http://www.recons.org>)
- 2014 Astronomy on Tap presenter
- 2013-2014 American Museum of Natural History Lang Science Program mentor
- 2012-present American Museum of Natural History Science Research Mentoring Program mentor
- 2011 Assistant at DragonCon Space Track
- 2010 Guest lecturer at Lenox Memorial High School, Lenox MA
- 2010 Visiting guest at Brumby Elementary School, Marietta, GA
- 2009 Guest lecturer at Lenox Memorial High School, Lenox MA
- 2009 Developed a fully 3D display of the solar neighborhood for the RECONS public pages (<http://www.recons.org>; <http://www.astro.gsu.edu/~riedel/3D.html>)

Professional Organizational Activities:

- 2014-present Individual Member, LSST “Stars, Milky Way, and Local Volume” collaboration.
- 2013-present Member, New York State Academy of Sciences
- 2005-present Member, American Astronomical Society

Administrative Experience:

- 2005-2006 President of the Villanova Astronomical Society

Public Press:

- 2013 “A Pair of Stellar Newborns Shine Brightly” by Ken Crowell, in Scientific American online. <http://www.scientificamerican.com/article.cfm?id=a-pair-of-stellar-newborns-shine-brightly> retrieved 2013-11-07
- 2011 “Baby Star found on Earth's Doorstep” by Ken Crowell, in ScienceNOW online mag. <http://news.sciencemag.org/sciencenow/2011/09/baby-star-found-on-earths-doorst.html> retrieved 2013-11-07
- 2011 “Baby star found close to Earth" by Beau Gamble, in Australian Geographic online. <http://www.australiangeographic.com.au/journal/baby-star-found-close-to-earth-ap-columbae.htm> Retrieved 2013-11-07

Funding:

Received as PI:

Confirmation of Young Brown Dwarfs in Nearby Moving Groups
\$16,000 from NASA for Keck Telescope Observation support

CUNY Postdoctoral Travel Grant
\$1,000 from the City University of New York

Received as Co-Investigator (PI: Angelle Tanner, MSU)
A Study of Cold Disks around M dwarfs and the Formation of Extrasolar Planets
\$104,093 from the NASA Herschel Science Center (maximum award; actual award depends on percentage of program observed)

Received as Co-Investigator (PI: Todd Henry, GSU)
The RECONS Survey of the Solar Neighborhood
\$581,591 from the National Science Foundation

Received as Co-Investigator (PI: Doug Gies, GSU)
Binaries at the Extremes of the H-R Diagram
\$265,995 from the Space Telescope Science Institute

Refereed Journal Publications *BDNYC collaborators are italicized.*

20. *Faherty, J.K.; Riedel, A.R.; Cruz, K.; Rice, E.L.; Rodriguez, D.R.; Baldassare, V.; Blunt, S.C.*; 2015. Young Brown Dwarfs at the Exoplanet Boundary. *In preparation.*
19. **Riedel, A.R.**; *Blunt, S.C.; Lambrides, E.; Rice, E.L.; Cruz, K.L.* 2015. LAcEwiNG: An analysis of Lithium-rich young stars in the Solar Neighborhood. *In preparation.*

18. Winters, Jennifer G. ; Henry, Todd J. ; Lurie, John C. ; Hambly, Nigel C. ; Jao, Wei-Chun ; Bartlett, Jennifer L. ; Boyd, Mark R. ; Dieterich, Sergio B. ; Finch, Charlie T. ; Hosey, Altonio D. ; Ianna, Philip A. ; **Riedel, Adric R.** ; Slatten, Kenneth J. ; Subasavage, John P. 2014. The Solar Neighborhood XXXV: Distances to 1404 M Dwarf Systems Within 25 pc in the Southern Sky. *Astronomical Journal*. *Submitted*.
17. Finch, Charlie ; Zacharias, Norbert ; Subasavage, John ; Henry, Todd ; **Riedel, Adric**. 2014. UCAC4 Nearby Star Survey: A Search for Our Stellar Neighbors. *Astronomical Journal*. 148, 119.
16. Lurie, John C. ; Henry, Todd J. ; Jao, Wei-Chun ; Quinn, Samuel N. ; Winters, Jennifer G. ; Ianna, Philip A. ; Koerner, David W. ; **Riedel, Adric R.** ; Subasavage, John P. 2014. The Solar Neighborhood. XXXIV. a Search for Planets Orbiting Nearby M Dwarfs Using Astrometry. *Astronomical Journal*. 148 91.
15. Malo, L.; Doyon, R., Feiden, G.A.; Albert, Loïc; Lafreniere, D.; Artigau, E; Gagne, J.; **Riedel, A.** 2014. BANYAN. IV. Fundamental Parameters of Low-mass Star Candidates in Nearby Young Stellar Kinematic Groups – Isochronal Age Determination using Magnetic Evolutionary Models. *Astrophysical Journal*. 792 37.
14. **Riedel, A.R.**; Finch, C.T.; Subasavage, J.P.; Henry, T.J.; Jao, W-C; Malo, L.; Rodriguez, D.R.; White, R.J.; Gies, D.R.; Dieterich, S.B.; Winters, J.G.; Davison, C.L.; Nelan, E.P.; Blunt, S.C.; Cruz, K.L; Rice, E.L.; Ianna, P.A. 2014. The Solar Neighborhood. XXXIII. Parallax Results from the CTIOPI 0.9-m Program: Trigonometric Parallaxes of Nearby Low-Mass Active and Young Systems. *Astronomical Journal* 147 85.
13. Dieterich, S.B.; Henry, T.J.; Jao, W-C.; Winters, J.G.; Hosey, A.A.; **Riedel, A.R.**; Subasavage, J.P. 2014. The Solar Neighborhood. XXXII. The Hydrogen Burning Limit. *Astronomical Journal* 147 94.
12. Davison, C.L.; White, R.J.; Jao, W-C.; Henry, T.J.; Bailey, J.I. III; Quinn, S.N.; Cantrell, J.R.; **Riedel, A.R.**; Subasavage, J.P.; Winters, J.G.; Crockett, C.J. 2014. The Closest M-dwarf Quadruple System to the Sun. *Astronomical Journal* 147 26.
11. Jao, W-C.; Henry, T.J.; Subasavage, J.P.; Winters, J.G.; Gies, D.R.; **Riedel, A.R.**; Ianna, P.A. 2014. The Solar Neighborhood XXXI: Discovery of an Unusual Red+White Dwarf Binary at ~25 Parsecs via Astrometry and UV Imaging. *Astronomical Journal* 147 21.
10. Mamajek, E.E.; Bartlett, J.L.; Seifhart, A.; Henry, T.J.; Dieterich, S.B.; Lurie, J.C.; Kenworthy, M.A.; Jao, W-C.; **Riedel, A.R.**; Subasavage, J.P.; Winters, J.G.; Finch, C.T.; Ianna, P.A.; Bean, J. 2013. The Solar Neighborhood. XXX. Fomalhaut C. *Astronomical Journal* 146 154.

9. Delorme, P.; Gagne, J.; Girard, J.H.; Lagrange, A.M.; Chauvin, G.; Naud, M-E.; Lafreniere, D.; Doyon, R.; **Riedel, A.**; Bonnefoy, M.; Malo, L. 2013. Direct imaging of a 12-14 Jupiter-mass object orbiting a young binary system of very low-mass stars. *Astronomy & Astrophysics* 553 5
8. Malo, L.; Doyon, R.; Lafreniere, D.; Artigau, E.; Gagne, J.; Baron, F.; **Riedel, A.** 2013. Bayesian analysis to identify new star candidates in nearby young stellar kinematic groups. *Astrophysical Journal* 762 88.
7. Baines, E.K.; Huber, D.; White, R.J.; Jones, J.; Boyajian, T.; McAlister, H.A.; Brummelaar, T.; Turner, N.H.; Sturmann, J.; Sturmann, L.; Goldfinger, P.J.; Farrington, C.D.; **Riedel, A.R.**; Ireland, M.; von Braun, K.; Ridgeway, S.T. 2012. CHARA Array Measurements of HR 8799 and Their Implications For The Imaged Companions. *Astrophysical Journal* 761 57.
6. **Riedel, A.R.**; Murphy, S.; Henry, T.J.; Melis, C.; Jao, W-C; Subasavage, J.P. 2011. The Solar Neighborhood. XXVI. AP Col: The Closest (8.4 pc) Pre-main-sequence Star. *Astronomical Journal*. 142, 104.
5. Jao, Wei-Chun; Henry, T.J.; Subasavage, J.P., Winters, J.G., **Riedel, A.R.**; Ianna, P.A. 2011. The Solar Neighborhood XXIV. Parallax Results from the CTIOPI 0.9-m Program: Stars with $\mu \leq 1.0'' \text{ yr}^{-1}$ (MOTION Sample) and Subdwarfs. *Astronomical Journal*. 141, 117.
4. von Braun, K.; Boyajian, T.S.; Kane, S.R.; van Belle, G.T.; Ciardi, D.R.; López-Morales, M.; McAlister, H.A.; Henry, T.J.; Jao, W-C; **Riedel, A.R.**; Subasavage, J.P; Schaefer, G.; ten Brummelaar, T.A.; Ridgeway, S.; Sturmann, L.; Sturmann, J.; Mazingue, J.; Turner, N.H.; Farrington, C.; Goldfinger, P.J.; Boden, A.F. 2011. Astrophysical Parameters and Habitable Zone of the Exoplanet Hosting Star GJ 581. *Astrophysical Journal*. 729L, 26
3. **Riedel, A. R.**; Subasavage, J.P.; Finch, C.T.; Jao, W-C; Henry, T.J.; Winters, J.G; Brown, M.A.; Ianna, P.A., Costa, E.; Mendez, R.A. 2010. The Solar Neighborhood. XXII. Parallax Results from the CTIOPI 0.9m Program: Trigonometric Parallaxes of 64 Nearby Systems with $0.5'' \leq \mu \leq 1.00 \text{ yr}^{-1}$ (SLOWMO sample). *Astronomical Journal*. 140, 897
2. Gies, D. R.; Dieterich, S.; Richardson, N. D.; **Riedel, A.R.**; Team, B.L.; McAlister, H.A.; Bagnuolo, W.G., Jr.; Grundstrom, E.D.; Štefl, S.; Rivinius, Th.; Baade, D. 2008. A Spectroscopic Orbit for Regulus. *Astrophysical Journal*. 682, 117
1. Hamilton, Ryan T.; Urban, Joel A.; Sion, Edward M.; **Riedel, Adric R.**; Voyer, Elyse N.; Marcy, John T.; Lakatos, Sarah L. 2007. An International Ultraviolet Explorer Archival Study of Dwarf Novae in Outburst. *Astronomical Journal* 667, 1139

Book Chapters:

1. Henry, T.J., Gies, D.R., Jao, W.C., **Riedel, A.R.**, Subasavage, J.P., Benedict, G.F., Harris, H.C., Ianna, P.A., Thorstensen, J.R., Beichman, C., Prato, L., & Simon, M. 2009, Stellar Maps with SIM Lite in NASA's SIM Lite Astrometric Observatory, p 83-96

Conference Proceedings:

3. **Riedel, Adric R.** 2014. Kinematics and Luminosities of Brown Dwarfs with the BDNYC group. Proceedings of Gaia and the Unseen: The Brown Dwarf Question.
2. Burgasser, A.J.; Faherty, J.K.; Schmidt, S.; West, A.A.; Zapatero Osorio, M.R.; Pineda, J.S.; Burningham, B.; Nicholls, C.; Sanderson, R.; Shkolnik, E.; Rodriguez, D.; **Riedel, A.**; Joergens, V. 2013. The Kinematics of very low mass dwarfs: Splinter session summary. Proceedings of Cool Stars 17 meeting.
1. **Riedel, Adric R.**, Henry, Todd J., White, Russel J., Song, Inseok, Jensen, Eric L.N., Hambly, Nigel C. 2010. Nearby Motionless Stars, Proceedings of Cool Stars 16 meeting.

Abstracts:

6. **Riedel, A.R.**; Blunt, S.C.; Cruz, K.L.; Rice, E.L.; Faherty, J.K.; BDNYC. 2014. Our Youngest Neighbors: Brown Dwarfs in Nearby Moving Groups. AAS 223 345.21
5. **Riedel, A.R.**; Henry, T.J.; White, R.J.; Song, I; Jensen, Eric L.N.; Hambly, N.C.; RECONS. 2011. Nearby Motionless Stars. AAS 217 242.16
4. **Riedel, A.R.**; Henry, T.J.; White, R.J.; Song, I; Jensen, E.L.; RECONS. 2010. The CTIOPI Cradle: Young Stars with Parallaxes. AAS 215 429.22
3. **Riedel, A.R.**; Henry, T.J.; Winters, J.G.; Hambly, N.C.; RECONS. 2009. Stellar Slowpokes: Nearby Stars with Tiny Proper Motions. AAS 213 406.15
2. **Riedel, A.R.**; Beaulieu, T.; Henry, T.J.; Jao, W.; Gray, R.O.; Corbally, C.J.; Finch, C.; RECONS. 2007. Fingerprinting 85% of Galactic Suspects: A New K-M Dwarf Spectral Sequence. AAS 211 103.18
1. **Riedel, A.R.**; Guinan, E.F.; DeWarf, L.E.; Engle, S.G.; McCook, G.P. 2005. *Barnard's Star as a Proxy for Old Disk dM Stars: Magnetic Activity, Light Variations, XUV Irradiances, and Planetary Habitable Zones.* AAS 206 09.04