

# CURRICULUM VITAE

## Timothy Robishaw

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**Personal Information:** US citizen born 15 April 1976 in Boston, Massachusetts

### Education

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- Ph.D. in Astrophysics, University of California at Berkeley, 2008
  - Dissertation: “*Magnetic Fields Near and Far: Galactic and Extragalactic Single-Dish Radio Observations of the Zeeman Effect*”
  - Advisor: Carl Heiles
- M.A. in Astrophysics, University of California at Berkeley, 2002
- B.A. in Astrophysics (with Honors) and Physics, University of California at Berkeley, 1998
  - Honors Thesis: “*A Statistical Analysis of High-Velocity Clouds in the Leiden/Dwingeloo Survey*”
  - Advisor: Leo Blitz
- Boston Latin School, Class of 1994

### Honors and Awards

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- 2007 International Union of Radio Science Travel Grant
- 2007 International Astronomical Union Travel Grant
- 2007 National Radio Astronomy Student Support Award
- 2002–2006 Green Bank Telescope Student Support Award (5 separate awards)
- 1999 University of Maryland Graduate School Fellowship
- 1998 Dorothea Klumpke-Roberts Prize (UC Berkeley Department of Astronomy)
- 1995 Phillips Prize (Raytheon Co.)

### Employment History

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- Postdoctoral Fellow in Radio Polarimetry, The University of Sydney, 2008–*present*
- Graduate Student Researcher, University of California at Berkeley, 2000–2008
- Graduate Teaching Assistant, University of Maryland at College Park, 1999–2000
  - *Astronomical Techniques* with Professor J. P. Harrington
  - *Theoretical Astrophysics* with Professor L. Mundy
- Research Assistant to Dr. Leo Blitz, University of California at Berkeley, 1998–1999
  - Studies of high-velocity clouds of neutral hydrogen and dwarf spheroidal galaxies.
- Research Intern, Antenna Systems Lab at Florida Tech, SARA/REU Program, 1997
  - Constructed a superheterodyne 1-m radio telescope and measured the far-field beam pattern.
- Teaching Assistant, University of California at Berkeley, 1997
  - *Introductory Astronomy* with Professor A. V. Filippenko
- Student Teacher, Department of Physics, Astronomy, & Geology and Holt Planetarium, Lawrence Hall of Science, UC Berkeley, 1995–1997
  - Hundreds of hours presenting science and planetarium programs to students and public.

### Observing Experience

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- 100-m Robert C. Byrd Green Bank Telescope — PI of 9 projects (487 hr) and Co-PI of 16 (1260 hr)
- 305-m Arecibo Telescope — PI of 5 projects (677 hr; 1 *Large Proposal* of 455 hr) and Co-PI of 3 (227 hr)
- 64-m Parkes Radio Telescope — PI of 2 projects (100 hr)
- BIMA Millimeter Array — 3 weeks as on-site observer; PI of 1 project (30 hr)
- Very Large Array — PI of 1 project (25 hr)
- High-Sensitivity Array (VLBA + phased VLA + GBT + Arecibo) — PI of 1 project (14 hr)

### Computer Skills

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- Expert knowledge of Unix/Linux,  $\LaTeX$ , & IDL.
- Working knowledge of Perl, AIPS, GBTIDL, Karma, Matlab, & MIRIAD.
- Developing knowledge of C, Lisp, & Python.

## Professional Societies

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- American Astronomical Society (AAS)
- Astronomical Society of Australia (ASA)
- Astronomical Society of the Pacific (ASP)
- International Union of Radio Science (URSI)

## Publications

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### Refereed Journal Articles

7. “*On Measuring Accurate 21 cm Line Profiles with the Robert C. Byrd Green Bank Telescope*,” Robishaw, T., & Heiles, C. 2009, PASP, 121, 272–294
6. “*A Limit on the Polarized Anomalous Microwave Emission of Lynds 1622*,” Mason, B. S., Robishaw, T., Heiles, C., Finkbeiner, D., & Dickinson, C. 2009, ApJ, in press (arXiv:0901.0133)
5. “*An 84- $\mu$ G Magnetic Field in a Galaxy at Redshift  $z = 0.692$* ,” Wolfe, A. M., Jorgenson, R. A., Robishaw, T., Heiles, C., & Prochaska, J. X. 2008, Nature, 455, 638–640
4. “*Extragalactic Zeeman Detections in OH Megamasers*,” Robishaw, T., Quataert, E., & Heiles, C. 2008, ApJ, 680, 981–998
3. “*HI Imaging of LGS 3 and an Apparently Interacting High-Velocity Cloud*,” Robishaw, T., Simon, J. D., & Blitz, L. 2002, ApJ, 580, L129–L132
2. “*Gas Rich Dwarf Spheroidals*,” Blitz, L., & Robishaw, T. 2000, ApJ, 541, 675–687
1. “*Broadband Optical Observations of BL Lacertae during the 1997 Outburst*,” Webb, J. R., Freedman, I., Howard, E., Ma, F., Belfort, M., Rave, H., Rumstay, K., Nicol, S., Krick, J., Oswalt, T. D., Marshall, D., & Robishaw, T. 1998, AJ, 115, 2244–2249

### Technical Reports

3. “*The Proper Production of Full-Stokes Spectra Using the Fully-Functioning Full-Stokes Mode of the GBT Spectrometer*,” Robishaw, T., & Heiles, C. 2006, GBT Memos, Memo 244
2. “*Calibrating the GBT at L, C, and X Bands*,” Heiles, C., Robishaw, T., Troland, T., & Roshi, D. A. 2003, GBT Commissioning Memos, Memo 23
1. “*Construction of a Radio Astronomical Receiver and Determination of the Far-Field Pattern*,” Robishaw, T. 1998, IAPPP Communications, No. 71, 97–99

### Conference Proceedings

6. “*The Magnetic Field in Luminous Star-Forming Galaxies*,” Robishaw, T., & Heiles, C. 2009, in IAU Symp. 259, Cosmic Magnetic Fields: from Planets, to Stars and Galaxies, ed. K.G. Strassmeier, A.G. Kosovichev & J.E. Beckman (Cambridge: Cambridge Univ. Press), 493–498
5. “*Zeeman Splitting in the Diffuse Interstellar Medium - The Milky Way and Beyond*,” Heiles, C., & Robishaw, T. 2009, in IAU Symp. 259, Cosmic Magnetic Fields: from Planets, to Stars and Galaxies, ed. K.G. Strassmeier, A.G. Kosovichev & J.E. Beckman (Cambridge: Cambridge Univ. Press), 579–590
4. “*Magnetic Fields in Irregular Galaxies*,” Kepley, A., Wilcots, E., Zweibel, E., Mühle, S., Everett, J., Robishaw, T., Heiles, C., & Klein, U. 2009, in IAU Symp. 259, Cosmic Magnetic Fields: from Planets, to Stars and Galaxies, ed. K.G. Strassmeier, A.G. Kosovichev & J.E. Beckman (Cambridge: Cambridge Univ. Press), 493–498
3. “*Zeeman Splitting in OH Megamasers*,” Robishaw, T., Heiles, C., & Quataert, E. 2007, in IAU Symp. 242, Astrophysical Masers and their Environments, ed. J. Chapman & W. Baan (Cambridge: Cambridge Univ. Press)
2. “*Magnetic Fields in Irregular Galaxies*,” Kepley, A. A., Muehle, S., Wilcots, E. M., Everett, J., Zweibel, E., Robishaw, T., & Heiles, C. 2007, in Galaxies in the Local Volume, ed. B. Koribalski & H. Jerjen (Berlin: Springer), arXiv:0708.3405
1. “*Dark Matter in Dwarf Galaxies: The First Dark Galaxy?*” Simon, J. D., Robishaw, T., & Blitz, L. 2004, in ASP Conf. Ser. 327, Satellites and Tidal Streams, ed. F. Prada et al. (San Francisco: ASP), 32

## Talks

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### Invited

- “*Let’s Split! Using the Zeeman Effect to Probe B Fields Near and Far*,” ATNF AstroFest, 4 December 2008
- “*The Magnetic Field in Luminous Star-Forming Galaxies*,” IAU Symposium 259: Cosmic Magnetic Fields: from Planets to Stars and Galaxies, 4 November 2008
- “*Becoming Troland: Single-Dish Zeeman Observing & Single-Malt Whiskey Drinking*,” The Cosmic Agitator: Magnetic Fields in the Galaxy, 28 March 2008
- “*Polarimetric Calibration of and Zeeman-Splitting Detections from the 100-m Green Bank Telescope and the 305-m Arecibo Telescope*,” Commission J: Radio Astronomy: Polarimetric Radio Astronomy Techniques and Observations, URSI North American Radio Science Meeting, 26 July 2007
- “*Probing Magnetic Fields Near and Far with the Zeeman Effect*,” Star Formation/ISM Seminar, Department of Astronomy, UC Berkeley, 15 May 2007
- “*GBT Measurements of the Zeeman Effect in the Orion Molecular Complex*,” Physics 290B: Space Physics Research Group Seminar, Space Sciences Lab, UC Berkeley, 2 May 2006
- “*Polarization Measurements at the GBT: Calibration, Sidelobes, and the Zeeman Effect*,” Radio and Geoastronomy Lunch Talks, Harvard-Smithsonian Center for Astrophysics, 16 January 2004
- “*The GBT: Probing Magnetic Fields with Zeeman Splitting of the 21-cm Line*,” Commission J: Radio Astronomy: New Science and Technical Developments from the Green Bank Telescope, URSI National Radio Science Meeting, 3 January 2004
- “*Arecibo Mapping of HI in High-Velocity Clouds and Dwarf Galaxies*,” Special Session 89: Observing with the Upgraded Arecibo Telescope: Methods and Recent Results, 198th Meeting of the AAS, 7 June 2001

### Contributed

- “*The Discovery of Extragalactic Magnetic Fields in OH Megamasers*,” IAU Symposium 242: Astrophysical Masers and Their Environments, 16 March 2007
- “*The Discovery of Extragalactic Magnetic Fields in OH Megamasers*,” Session 198: ISM/Star Formation, 209th Meeting of the AAS, 9 January 2007
- “*GBT Measurements of the Zeeman Effect*,” Session 195: Kinematics of the ISM, 207th Meeting of the AAS, 12 January 2006
- “*GBT Measurements of the Zeeman Effect in the Eridanus/Orion Region*,” Polarization 2005: Sky Polarization at Far-Infrared to Radio Wavelengths, University of Paris, 14 September 2005
- “*A Catalog of High-Velocity Clouds in the Leiden/Dwingeloo Survey*,” Session 117: Star Formation and the ISM at Galactic Scales, 199th Meeting of the AAS, 9 January 2002
- “*Gas Rich Dwarf Spheroidals*,” Session 90: Gas in Galaxies, 195th Meeting of the AAS, 14 January 2000

### Media Coverage

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- “*Magnetic Fields in Other Galaxies*,” Astronomy.com, 16 January 2007
- “*Astronomers Find Magnetic Slinky in Orion*,” UC Berkeley Press Release, 12 January 2006
- “*Space ‘Slinky’ Confirms Theory with a Twist*,” Space.com, 12 January 2006
- “*Threading the Magnetic Slinky*,” West Virginia Mountain Radio Astronomy Show, WVMR, 9 April 2005
- “*Astronomers Find First ‘Dark Galaxy’*,” NewScientist.com, 20 October 2003
- “*Gas Clouds in Space: Remnants of the Big Bang?*” by Keay Davidson, San Francisco Examiner, 14 January 2000

### Conferences & Workshops Attended

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- MWA Project Meeting, 16–19 June 2009 — Seattle, WA, USA
- MWA Project Meeting, 19–23 January 2009 — Canberra, ACT, AUS
- ATNF AstroFest, 3–4 December 2008 — Marsfield, NSW, AUS
- IAU Symposium 259: Cosmic Magnetic Fields: from Planets to Stars and Galaxies, 3–7 November 2008 — Puerto Santiago, Tenerife, ESP
- The Cosmic Agitator: Magnetic Fields in the Galaxy, 26–29 March 2008 — Lexington, KY, USA
- 2007 URSI North American Radio Science Meeting, 22–26 July 2007 — Ottawa, ON, CAN
- IAU Symposium 242: Astrophysical Masers and Their Environments, 12–16 March 2007 — Alice Springs, NT, AUS
- 209th Meeting of the American Astronomical Society, 5–10 January 2007 — Seattle, WA, USA
- 207th Meeting of the American Astronomical Society, 8–12 January 2006 — Washington, DC, USA
- Polarization 2005: Sky Polarization at Far-Infrared to Radio Wavelengths, 12–15 September 2005 — Paris, FRA
- GBTIDL Design Workshop (*Invited*), 15 October 2004 — Green Bank, WV, USA

- Diffuse Matter in the Galaxy: Observations Confront Theory — A Meeting in Honor of the 65th Birthday of Carl Heiles, 29 August–2 September 2004 — Arecibo, Puerto Rico, USA
- 2004 URSI National Radio Science Meeting, 4–8 January 2004 — Boulder, CO, USA
- Milky Way Surveys: The Structure and Evolution of Our Galaxy, 15–17 June 2003 — Boston, MA, USA
- 199th Meeting of the American Astronomical Society, 6–10 January 2002 — Washington, DC, USA
- 198th Meeting of the American Astronomical Society, 3–7 June 2001 — Pasadena, CA, USA
- 7th Synthesis Imaging Summer School, 20–27 June 2000 — Socorro, NM, USA
- Looking Ahead In Wonder: From Comets to the Universe — J. H. Oort Centenary Symposium, 25–27 April 2000 — Leiden, NLD
- 195th Meeting of the American Astronomical Society, 11–15 January 2000 — Atlanta, GA, USA
- Science with the Atacama Large Millimeter Array, 6–8 October 1999 — Washington, DC, USA
- BIMA Interferometry Summer School, 19–23 July 1999 — Hat Creek, CA, USA