

# SHEA BROWN

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## Office Address

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## Contact Information

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<b>Education</b>	UNIVERSITY OF MINNESOTA Ph.D. in Astronomy Thesis Title: "Tracing Large-Scale Structure with Radio Observations" Thesis Advisor: Professor Lawrence Rudnick	June 2009
	BRANDEIS UNIVERSITY M.S. in Physics	May 2005
	UNIVERSITY OF MAINE B.A. in Physics, summa cum laude	Jun. 2003
<b>Research Experience</b>	BOLTON FELLOW, THE AUSTRALIA TELESCOPE NATIONAL FACILITY Detection of polarized synchrotron emission in the cosmic-web with ASKAP Foreground subtraction for EoR cosmology with the MWA	2008-Present
	GRADUATE RESEARCH ASSISTANT, U. MINNESOTA Supervisor: Lawrence Rudnick Radio detection of large-scale structure formation shocks Detecting local voids using the late ISW effect Polarized galactic foregrounds (for WHIM, EoR HI, CMB polarization, etc.)	2005 - 2008
	GRADUATE RESEARCH ASSISTANT, BRANDEIS U. Supervisor: John Wardle Distance measurements to very high red-shift radio galaxies using the VLBA	2004-2005
<b>Honors</b>	BOLTON FELLOWSHIP, ATNF	2008
	DOCTORAL DISSERTATION FELLOWSHIP Awarded \$22,000 by the Graduate School at The University of Minnesota to support dissertation research.	2008-2009
	GREEN BANK TELESCOPE STUDENT SUPPORT Awarded \$18,500 to support observations on the GBT in the 07C semester.	2007
	OUTSTANDING TEACHING PRIZE Awarded by the Brandeis University Physics Department in recognition of the outstanding teaching assistant of the year.	2003-2004
	DAVID L. FALKOFF GRADUATE SCHOOL PRIZE IN PHYSICS A cash prize awarded by the Graduate School of Arts and Sciences and Brandeis University to the outstanding graduate student in the Physics Department.	2003-2004
OLLI AT BRANDEIS SCHOLAR Awarded by the Osher Lifelong Learning Institute at Brandeis (BOLLI).	Fall 2004	

- Publications** DIFFUSE RADIO EMISSION IN/AROUND THE COMA CLUSTER: BEYOND THE SIMPLE ACCRETION SENARIO  
**Brown, S. D.**, & Rudnick, L. 2009, in preparation
- DIFFUSE GALACTIC POLARIZED FOREGROUNDS AND FARADAY TOMOGRAPHY AT 350 MHZ  
**Brown, S. D.**, Farnsworth, D. & Rudnick, L. 2009, in preparation
- CROSS-CORRELATION OF DIFFUSE SYNCHROTRON AND LARGE-SCALE STRUCTURES  
**Brown, S. D.**, Farnsworth, D. & Rudnick, L. 2009, accepted to MNRAS, arXiv:0910.3015
- DIFFUSE CLUSTER-LIKE RADIO EMISSION IN POOR ENVIRONMENTS  
**Brown, S.**, & Rudnick, L. 2009, AJ, 137, 3158
- THE DISCOVERY OF DIFFUSE RADIO POLARIZATION STRUCTURES IN THE NVSS  
Rudnick, L., & **Brown, S.** 2009, AJ, 137, 145
- EXTRAGALACTIC RADIO SOURCES AND THE WMAP COLD  
Rudnick, L., **Brown, S. D.**, & Williams, L. L. R., 2007, ApJ, 671, 40
- THE ARECIBO LEGACY FAST ALFA SURVEY: III. HI SOURCE CATALOG OF THE NORTHERN VIRGO CLUSTER REGION  
Giovannelli, R., Haynes, M. P., **et al.** 2007, AJ, 133.2569G
- Proceedings** DETECTING MAGNETIC FIELDS IN LARGE-SCALE STRUCTURE WITH RADIO POLARIZATION  
**Brown, S.**, Rudnick, L., & Farnsworth, D. 2009, IAU Symposium, 259, 669
- Posters** MAGNETIC FIELDS IN LARGE-SCALE STRUCTURE WITH RADIO POLARIZATION  
**Brown, S. D.**, Rudnick, L., & Farnsworth, D. 2007, IAU Symposium 259, Cosmic Magnetic Fields: from Planets, to Stars and Galaxies, Tenerife, Spain
- TRACING LARGE-SCALE STRUCTURE WITH RADIO POLARIZATION  
**Brown, S. D.**, Rudnick, L., 2007  
Tracing Cosmic Evolution with Clusters of Galaxies: Six Years Later, Sesto, Italy
- A NEW VIEW OF THE POLARIZED SKY WITH THE NVSS SURVEY  
**Brown, S. D.**, Rudnick, L., 2007, Astrophysics in the LOFAR era (Astron), Emmen, NL
- NEW PROBES OF LARGE SCALE STRUCTURES WITH RADIO POLARIZATION  
Rudnick, L., **Brown, S. D.**, 27th Texas Symposium on Relativistic Astrophysics, Melbourne University 2006
- Other** CLUSTERS AND LARGE-SCALE STRUCTURE: THE SYNCHROTRON KEYS  
Rudnick, L., **et al.** 2009, AGB Stars and Related Phenomen astro2010: The Astronomy and Astrophysics Decadal Survey, 2010, 253 arXiv:0903.0824