

Nicholas A. Bond

CONTACT INFORMATION	400 Grist Mill Crossing Severna Park, MD 21146	609-651-0410 (Cell) nbond@physics.rutgers.edu
EDUCATION	Ph.D. in Astrophysical Sciences (completed masters level coursework in both astrophysics and physics), January 2008 Princeton University, Princeton, NJ B.S. in Astronomy/Astrophysics with Honors, May 2002 The Pennsylvania State University, University Park, PA	
RESEARCH EXPERIENCE	Postdoctoral Associate, Rutgers University, 2007-present <ul style="list-style-type: none">• Determined the size distribution and morphologies of Lyman-α-Emitting galaxies using <i>HST</i>/ACS imaging (Bond et al. 2009; Gronwall et al., in preparation)• Developed data reduction pipeline for optical broadband and narrowband imaging taken with the MOSAIC camera on the CTIO 4-m telescope (Guaita et al., in preparation) Graduate Research Assistant, Princeton University, 2002-2007 <ul style="list-style-type: none">• Invented a technique for identifying individual filamentary structures in the SDSS galaxy distribution using the smoothed Hessian matrix (Bond et al., in preparation, Bond 2008)• Invented a technique for tracing the non-linear evolution of structures in the SDSS galaxy distribution using the distribution of Hessian eigenvalues (Bond, Strauss, & Cen 2009)• Identified a correlation between galaxy clusters and the ends of filaments in the SDSS galaxy distribution using the two-point correlation function (Bond 2008)• Found a smooth vertical gradient in the rotational velocity and velocity dispersions of stars in the Milky Way disk using SDSS-POSS proper motions (Bond et al., 2009)• Developed a method for making a direct determination of the distance to M31 using X-Ray scattering off of dust grains (Draine & Bond 2003) Undergraduate Research Assistant, Penn State, 1999-2002 <ul style="list-style-type: none">• Found galactic outflows to be a likely cause of strong Mg II absorption systems (Bond et al. 2001b)• Identified possible evidence for expanding superbubbles in a $z = 0.7443$ galaxy through analysis of high-resolution ultraviolet spectroscopy (Bond et al. 2001a)	
PUBLICATIONS	33 publications, including one invited review article, 13 papers in refereed journals, five conference proceedings, and 13 conference abstracts/circulars.	
OBSERVING EXPERIENCE	Visiting Astronomer, Cerro Tololo Interamerican Observatory (5 nights)	

FELLOWSHIPS & AWARDS	<p>McGraw Center Graduate Student Liaison, 2003</p> <p>Schreyer Honors College Dean's Award for Research Achievement, 2002</p> <p>Mercury Astronaut Fellowship, 2001</p>
SCIENTIFIC COLLABORATIONS	<p>Member, MUSYC Collaboration, 2007-present</p> <p>Member, LSST Science Collaboration on Large-Scale Structure, 2008-present</p>
PROFESSIONAL SERVICE	<p>Weekly Seminar Organizer, Rutgers Astrophysics Group, 2008-2009</p> <p>Thursday Lunch (Thunch) Organizer, Princeton University Astrophysical Sciences, 2003-2004</p> <p>Member of American Astronomical Society</p>
INVITED TALKS	<p>Invited Review: MPIA Heidelberg Conference on Understanding Lyman Alpha Galaxies, Oct. 2008, "Morphologies of Lyα-emitting galaxies"</p> <p>Colloquium: Department of Astrophysical Sciences, Princeton University, Nov. 2007, "Crawling the Cosmic Network: An Exploration of Filamentary Structure"</p> <p>Invited Seminar: Physics and Astronomy Department, Rutgers University, Oct. 2007, "Crawling the Cosmic Network: An Exploration of Filamentary Structure"</p>
COMPUTER SKILLS	<p>Expert-level experience writing code for data analysis using Perl, Fortran, and Supermongo</p> <p>Intermediate-level experience writing code for data analysis using IRAF, IDL, C, and Bash shell</p> <p>Intermediate-level experience writing other software in PHP and Tcl/Tk, incorporating MySQL</p> <p>Expert-level experience with markup languages, including LaTeX and HTML</p> <p>Extensive experience with Unix, Linux, Mac OS X, and Windows operating systems</p>
TEACHING AND OUTREACH EXPERIENCE	<p>Substitute lecturer, March 2008 and February 2009. Lectured in two graduate cosmology classes with ~ 10 students and two undergraduate astronomy classes with ~ 100 students.</p> <p style="padding-left: 20px;">Rutgers University</p> <p>CONNECT-ED Program in Teacher Preparation, 2006. Coordinated with a group of 4 teachers to prepare a presentation to ~ 20 teachers and science professionals on astronomy fundamentals.</p> <p>QUEST Program in Teacher Preparation, Summer 2004. Instructed ~ 30 teachers K-12 on astronomy fundamentals.</p>

Teaching assistant for introductory astronomy course, Septemeber 2002 - January 2003. Prepared and presented precept on the Philosophy of Science and Astronomy.

Princeton University

Assisted with Penn State Astrofest, designed a “Tour of the Universe”, 2000-2002

REFERENCES

Prof. Michael Strauss, Princeton University, strauss@astro.princeton.edu

Prof. Eric Gawiser, Rutgers University, gawiser@physics.rutgers.edu

Prof. Zeljko Ivezic, University of Washington, ivezic@astro.washington.edu