

Kisha M. Delain

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Areas of Expertise Teaching and learning theory and application, evaluation and assessment, radio and X-ray astronomy (galaxies, clusters of galaxies)

Education M.S. Science Education
The impact of integrated telescope use on attitudes and conceptual understanding of introductory astronomy students
Montana State University
Bozeman, MT
July 2015

ABD – Astrophysics
Spectral analysis of multi-frequency observations of extragalactic radio sources.
University of Minnesota
Minneapolis, MN
May 2005

B.A. Physics
Carleton College
Northfield, MN
June 1996

Additional relevant education:
Preparing Future Faculty (teaching and mentoring)
Women in Leadership (mentoring, leading, management)
Geology courses: Remote sensing (including GIS); Weather & Climate; Climate change; Planetary science courses (Mars, Io, Meteoritics); Oceanography; Geology of Yellowstone; Thermal Biology (crossover class)

Teaching Experience **2010-present**
Adjunct Faculty, University of St. Thomas, St. Paul, MN
Intro physics (calculus & algebra); Intro astronomy; integrated lecture/lab classroom
Current Grant (co-PI): NSF 1525217 "Collaborative Research: Engaging Introductory Astronomy Students in Authentic Research through Citizen Science"

Previous Adjunct Faculty/Instructor Positions:
Century College, White Bear Lake, MN (Fall 2008) *Introductory Astronomy Lecture & Lab*
Anoka-Ramsey Community College, Coon Rapids, MN (2007-2008) *Intro Astro Lecture, Energy Issues and Solutions*

	<p>University of Minnesota, Minneapolis, MN (2002-2007) <i>Intro Astro Lecture & Lab</i> Harvard University, Cambridge, MA (2001) <i>Recitation section only, E&M</i></p> <p>Summer 2013 Occasional Instructor, Science Museum of Minnesota, St. Paul, MN Develop and run science camps for youth ages 6-8</p>
<p>Mentoring and Service</p>	<p>Student Mentoring More than 10 students successfully recommended into graduate and medical schools.</p> <p>Student Researchers: <i>Sydney Paugh</i>, undergraduate junior, Physics Department, University of St. Thomas, project in development. (Fall 2016) <i>Christina Jones</i>, high school student, Dept of Astronomy, UMN (Spring 2006). Project Title: "A Search for Giant Radio Galaxies using the NVSS" <i>Jeffrey Lemmerman</i>, undergraduate senior, Dept of Astronomy, UMN (Spring 2005). Project Title: "A Search for Radio Halos in the Brightest Cluster Sample"</p> <p>Service Anti-Racism Coalition, university of St. Thomas (present) Faculty Learning Community, University of St. Thomas (present) Officer, Women in Physics and Astronomy: Arrange speakers and events (2004-2007) Faculty-Student Liaison, Department of Astronomy, UMN (2005-2006)</p> <p>Outreach Programs Over a decade of experience speaking to the public about complex technical subjects through outreach to schools and the general public. A detailed list can be provided.</p>
<p>Selected Research & Experience</p>	<p>2003-2007 Research Assistant University of Minnesota, Minneapolis, MN Researched several topics using multiwavelength observations (radio, optical, X-ray), including: radio active galaxies and their connection to X-ray cooling flows; galaxy cluster and group dynamics; large scale structure and implications for galaxy cluster formation. Honors: Nominated for PEO Scholarship (2006). Awarded the Dosdall Fellowship.</p> <p>Research collaborations Researched X-ray point sources and diffuse emission in the Sombrero Galaxy. Researched active galaxies by reducing and analyzing optical spectra</p>

and fitting blackbody curves to multiwavelength spectral energy distributions. Smithsonian Astrophysical Observatory, Cambridge, MA.

2000-2002

Mission Planning

Smithsonian Astrophysical Observatory, Cambridge, MA

Coordinated observations with other observatories; planned and reviewed observing schedules; documented procedures; developed programs in Perl; developed internal websites.

January 2014

Contractor, Macmillan Holdings LLC, New York, NY

Write new content, revise content for correctness and clarity for an Introductory Astronomy Textbook

October 2008

Survey Contractor, Minnesota Zoo, Apple Valley, MN

Conducted 200 surveys of visitors to the Russia's Grizzly Coast exhibit

**Publications
& Talks**

Papers

Delain, K. M. and Rudnick, L. "Diffuse radio sources in groups and poor clusters", *Astronomische Nachrichten*, Vol.327, Issue 5/6, p.561, 2006

Rudnick, L., Delain, K. M. and Lemmerman, J. A. "Unbiased studies of diffuse extragalactic radio sources", *Astronomische Nachrichten*, Vol.327, Issue 5/6, p.549, 2006

Di Stefano, R. et al., "X-Ray Point Sources in the Sombrero Galaxy: Very Soft Sources, the Globular Cluster/Low-Mass X-Ray Binary Connection, and an Overview", *ApJ*, Volume 599, Issue 2, pp. 1067-1081, 2003

Kuraszkiewicz, Joanna K., et al. "The Far-Infrared Spectral Energy Distributions of X-Ray-selected Active Galaxies", *ApJ*, Volume 590, Issue 1, pp. 128-148, 2003

Talks

"Diffuse Emission in Groups and Clusters of Galaxies," *Harvard-Smithsonian Center for Astrophysics*, September 2007

"Choosing the Right Graduate School," *Macalester College*, April 2006

"Diffuse Emission in Groups and Clusters of Galaxies," *St. Thomas University*, April 2006

"Choosing the Right Graduate School," *St. Thomas University*, March 2006