

Kisha M. Delain

763-572-5071 (h) 763-218-1228 (c)
6211 Carol Dr. NE, Fridley, MN 55432

kisha.delain@gmail.com

Professional Skills & Knowledge

Programming & Technical

- Programming Languages: Python, Perl, C++, SQL, HTML, CSS, PHP, FORTRAN
- Statistical Packages: R, SPSS
- Other Software: *Mathematica*, AIPS, IRAF, LaTeX, GrassGIS, LabView, Microsoft Office Professional [includes excel pivot tables]
- Operating systems: Windows, Linux/Unix (including shell scripts)
- Object-oriented design
- Code workflow analysis
- Mathematical analysis
- Data management
- FFT, FTIR

Management

- Multi-project management [managing multiple instructors, TAs, and research]
- Facilitating effective teamwork [physics teaching; astronomy group projects]
- Conflict management [classroom management; advising students]
- Organization and coordination [SAO multi-observatory coordination]
- Mentoring [new faculty; research students; advising students]

Writing & Communication

- Over a decade of experience speaking to the public about complex technical subjects [outreach programs; intro astronomy; science museum]
- Writing technical documentation [programming docs; SAO docs]
- Grant writing [scientific observing proposals]

Knowledge areas

- Physics: antennas, radio astronomy, IR, optical, X-ray imaging, plasma physics
- Geology: weather & climate, climate change, remote sensing, planetary geology, oceanography, energy issues & policy
- Education: pedagogy, evaluation & assessment, formative assessment, NGSS
- Miscellaneous: thermal biology, organic chemistry

Work History

2010-present

Adjunct Faculty, University of St. Thomas, St. Paul, MN

Courses taught: Intro physics (calculus-based for engineers & algebra-based for pre-meds); Intro astronomy; integrated lecture/lab classroom. Develop curriculum, assessment & evaluation of student learning and engagement. Create laboratory exercises, course materials. Mentor students in research activities. Introduce new faculty to the laboratory equipment and exercises. Create documentation for other instructors of the laboratory course. Manage teaching assistants and other faculty as lead instructor. Collaborate with other departments on course content to meet needs of students.
Current Grant (co-PI): NSF 1525217 Collaborative Research: Engaging Introductory Astronomy Students in Authentic Research through Citizen Science"

January 2014

Contractor, Macmillan Holdings LLC, New York, NY
Write new content, revise content for correctness and clarity

Summer 2013

Occasional Instructor, Science Museum of Minnesota, St. Paul, MN
Develop and run science camps for youth ages 6-8

October 2008

Survey Contractor, Minnesota Zoo, Apple Valley, MN
Conducted 200 surveys of visitors to the Russia's Grizzly Coast exhibit

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*
University of Minnesota, Minneapolis, MN (2002-2007) *Intro Astro Lecture & Lab*
Harvard University, Cambridge, MA (2001) *Recitation section only, E&M*

2003-2007

Research Assistant
University of Minnesota, Minneapolis, MN
Honors: Nominated for PEO Scholarship (2006). Awarded the Dosdall Fellowship (2005-2006).

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. Collaborated on research of X-ray sources and IR spectra of active galaxies.

**Mentoring
and
Service****Student Mentoring**

More than 10 students successfully recommended into graduate and medical schools.

Sydney Paugh, undergraduate junior, Physics Department, University of St. Thomas (2016-2017). Project Title: "Multiwavelength Observations of Interacting Galaxies"

Christina Jones, high school student, Dept of Astronomy, UMN (Spring 2006).
Project Title: "A Search for Giant Radio Galaxies using the NVSS"

Jeffrey Lemmerman, undergraduate senior, Dept of Astronomy, UMN (Spring 2005).
Project Title: "A Search for Radio Halos in the X-ray Brightest Cluster Sample"

Service

Anti-Racism Coalition, University of St. Thomas (present)
Faculty Learning Community, University of St. Thomas (present)
Board Member, Aikido Yoshokai of Minnesota (2005-2010)
Officer, Women in Physics and Astronomy: Arrange speakers and events (2004-2007)
Faculty-Student Liaison, Department of Astronomy, UMN (2005-2006)

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.

Education

M.S. Science Education
Montana State University
Bozeman, MT
July 2015

ABD - Astrophysics
University of Minnesota
Minneapolis, MN
May 2005

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

References

Writing samples and references are available upon request