

NICOLE M. BARDABELIAS

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Education

The University of Arizona, Tucson, AZ
Masters in Geosciences, August 2019 – May 2021 (expected)
Advisor: Jack Holt

The University of Arizona, Tucson, AZ
Non-degree seeking, August 2017 – May 2019
Current GPA: 4.0
Relevant coursework: Introduction to Geochemistry, Mars, Special Topics in Planetary Science: Evolution of the Terrestrial Planets, Astrobiology

Stony Brook University, Stony Brook, NY
Advanced Certification in Geospatial Science, May 2016
Final GPA: 3.92, 4.0 major GPA
Relevant coursework: Remote Sensing, Geodatabase Design, GIS Project Management, GIS I, GIS II, Heat and Mass Transfer, Engineering Dynamics

Cornell University, Ithaca, NY
Bachelor of Arts *cum laude*, August 2014
Science of Earth Systems Major
Planetary Science concentration
Senior Thesis: *Reconstructing Ancient Stress Regimes within the Columbia Hills, Gusev Crater, Mars*

Work Experience

Science Operations Engineer, HiRISE Operations Center, The University of Arizona
January 2017 – present
Targeting specialist for HiRISE uplink team: plan observation sequences and perform command load generation for capturing high resolution images of Mars
Interact and collaborate with HiRISE and MRO personnel to plan observation sequences in detail, including choosing targets and camera settings with a detailed understanding of the MRO mission, the HiRISE camera, and Mars
Verify that imaging is properly commanded, identify potential problems, and implement solutions
Attend weekly mission operations teleconferences with HiRISE and NASA/JPL scientists and engineers

Research Experience

Graduate Researcher, Dr. Deanne Rogers, Stony Brook University, Stony Brook, NY
January 2016 – August 2016
Research aimed at creating a geologic map of Kamativi Crater, Mars
Analyzed CTX, CRISM, THEMIS, and HiRISE data
Conceptualized geologic boundary lines based on spectral data and surface feature morphology
Generated map features using both JMARS and ArcGIS software

Undergraduate Researcher, Dr. Steve Squyres, Cornell University, Ithaca, NY
June 2012 - May 2014
Research group led by Dr. Steve Squyres, Principal Investigator of the Mars Exploration Rovers mission
Identified MER Spirit images across the Columbia Hills of Gusev Crater with specific geologic features
Analyzed features using custom Python script
Spatially synthesized results to draw conclusions about ancient regional stress regimes
Attended tri-weekly mission operations teleconferences with NASA/JPL scientists and engineers

Professional Development & Conferences

UA Women's Hackathon, University of Arizona, AZ
October 2018, attendee
Used coding and other technologies to innovate human-based solutions to societal problems over two days

HiRISE Team Meeting, Ball Aerospace, CO

August 2018, presenter

Bi-annual meeting of JPL/HiRISE science and operations team to update group on recent work and mission status

Presented HiRISE Uplink operations update

HiRISE Team Meeting, University of Arizona, AZ; West Yellowstone, MT

March 2017; September 2017; March 2018, attendee

Bi-annual meeting of JPL/HiRISE science and operations team to update group on recent work and mission status

Athena Science Team Meeting, NASA Goddard Space Flight Center, MD

January 2014, attendee

Conference celebrating tenth anniversary of Mars Exploration Rovers mission; presentations focused on new developments in Mars rover program

American Physical Society Northeast Conference for Undergraduate Women in Physics, Cornell University, NY

January 2013, presenter

Poster presentation: *Examining joints in the West Spur, Gusev Crater, Mars*

Conference aimed at promoting camaraderie between female scientists across the Northeast

Geology Field Camp

State University of New York at Buffalo, CO, UT, WY

May – June 2013

Geology Field Training (GLY 407)

Explored field sites to create hard-copy geologic maps both in teams and individually

Teaching Experience

Teaching Assistant, Department of Astronomy, Cornell University, Ithaca, NY

August - December 2012

ASTRO 1101 - Introductory Astronomy for non-majors, taught by Dr. Terry Herter

Led 20 students in weekly recitation section

Proctored all exams, graded all homework assignments and tests, and held office hours and review sessions

Science Outreach

Museum in the Dark, Museum of the Earth, Ithaca, NY

October 2012, October 2013

Organized by Cornell Astronomy graduate students to present astronomy demonstrations to 80 young children

Prepared and led demonstrations at the Mars station to show differences between how geologists learn about rocks on the Earth and Mars

Focus for Teens, Cornell University, Ithaca, NY

June 2012, June 2013

Led astronomy workshop "Marsbound!" (2013) and assisted in workshop "Earth and the Solar System" (2012)

Campus-wide event for 4-H Career Explorations

Technical Skills

Software – JMARS, ArcGIS suite, MS Office: Word, PowerPoint, Excel, Access, Project, Visio, Publisher, Outlook

Functional Skills - Data acquisition, data processing, academic writing

Programming Skills – Perl, Python, LaTeX, SQL, basic UNIX shell scripting, IDL