

NADINE G. BARLOW

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EDUCATION:

PhD (1987) University of Arizona, Tucson, Arizona. Major: Planetary Sciences. Minor: Geophysics. Dissertation Title: "Relative Ages and the Geologic Evolution of Martian Terrain Units". Advisor: Robert G. Strom.

B.Sc. (1980) University of Arizona, Tucson, Arizona. Major: Astronomy. Minor: Geosciences/Chemistry.

PROFESSIONAL EXPERIENCE:

8/02-present: Assistant Professor (8/02-7/06)/Associate Professor (8/06-7/12), Professor (8/12-present), Department of Physics and Astronomy, Northern Arizona Univ., Flagstaff, AZ.

Associate Dept. Chair (2010-present)

5/09-8/10: Sabbatical at USGS Astrogeology Science Center, Flagstaff, AZ.

1/96-8/02: Instructor of Astronomy (1/96-8/98), Assistant Professor (8/98-8/02), and Director of UCF Robinson Observatory, Department of Physics, Univ. of Central Florida, Orlando, FL.

9/92-1/96: Visiting Scientist, Lunar and Planetary Institute, Houston, TX.

5/92-9/92: Scientific Support, Lunar and Mars Exploration Program Office, NASA Johnson Space Center, Houston, TX.

10/91-5/92: Visiting Scientist, NASA/Johnson Space Center, Houston, TX.

8/91-12/95: Adjunct Professor, School of Natural and Applied Science, University of Houston Clear Lake, Houston, TX.

10/89-9/91: National Research Council Associate, NASA/Johnson Space Center, Houston, TX.

2/87-8/89: Visiting Post-Doctoral Fellow, Lunar and Planetary Institute, Houston, TX

8/82-1/87: Graduate Research Assistant/Associate, Lunar and Planetary Laboratory, Univ. Arizona, Tucson, AZ.

2/82-8/82: Adjunct Professor and Planetarium Lecturer, Palomar Community College, San Marcos, CA

PROFESSIONAL SOCIETIES:

American Astronomical Society (AAS), Division for Planetary Sciences (DPS) (Member since 1986).

American Geophysical Union, Planetology Section (Member since 1983).

Geological Society of America, Planetary Geology Division (Member since 1991).

Meteoritical Society (Member since 1996).

International Astronomical Union (Member since 2009)

Sigma Xi (Member since 2002)

Committee on Undergraduate Research (Member since 2008).

FUNDED RESEARCH:

2015-2019: NASA Mars Data Analysis Program. Constraining Crater Modification and Primary Ejecta Characteristics of Martian Impact Craters via Quantitative Infrared and Visible Image Analysis (Co-I).

2014-2018: NASA Planetary Geology and Geophysics Program. Comparison of Central Pit Craters on Volatile-Poor and Volatile-Rich Bodies (PI).

2013-2016: NASA Planetary Mission Data Analysis Program. Evaluating the Timing of Lobate Scarp Formation on Mercury (Co-I).

2012-2016: NASA Mars Data Analysis Program. Detailed Investigations of Martian Central Pit Craters (PI).

2010-2014: NASA Mars Data Analysis Program. Investigating Indicators of Volatile-Rich Material in Arabia Terra, Mars (PI).

2009-2012: NASA Lunar Advanced Science and Exploration Research. GIS Database of Lunar Impact Craters (PI).

2008-2011: NASA Mars Data Analysis Program. Analysis of Central Pit Craters on Mars (PI).

2005-2007: NASA Outer Planets Research Program. Morphologic Analysis of Impact Craters on Ganymede (PI).

2005-2006: NASA Mars Fundamental Research Program. GIS Database and Tools for Martian Impact Craters (PI).

2004-2005: Northern Arizona University Intramural Grants Program. Secondary Crater Production on Mars and the Moon: Implications for Age Dating of Planetary Surfaces (PI).

2002-2004: NASA Mars Data Analysis Program. Continued Investigations of Martian Impact Crater Morphologies and Morphometries (PI).

1999-2002: NASA Mars Data Analysis Program. Investigations of Martian Impact Crater Morphologies and Morphometries (PI).

Other Grants:

2008-present: NASA Space Grant Program. Arizona Space Grant Consortium funded through NASA Education Program, with subcontract from University of Arizona to NAU (PI at NAU).

PRESENTATIONS AND PUBLICATIONS:

- Have given 65 contributed presentations at scientific conferences since 2002.
- Have given 27 invited presentations since 2002.
- Have been author or co-author on 3 books since 1996. Am co-author on another book in preparation.
- Have published 41 peer-reviewed publications since 1988.

STUDENT MENTORING:

- Have mentored 53 undergraduate students on research projects since 1987.
- Have mentored 15 graduate students on research projects since 1996.
- Have served as a member of 18 graduate student thesis/dissertation committees since 2002.

HONORS AND AWARDS:

American Association of University Women Texas Woman of the Year, 1992

University of Central Florida Teaching Incentive Program, 2001

University of Central Florida College of Arts and Sciences Excellence in Undergraduate Teaching Award, 2002

University of Central Florida Excellence in Undergraduate Teaching Award, 2002

Palomar Community College Alumna of the Year 2002-2003

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NAU Research and Creative Activity Award for Most Effective Research Mentor, 2011.

Exemplary Performer, NAU College of Engineering, Forestry, and Natural Sciences, 2012, 2014.

Most Influential Faculty Member for Gold Axe Recipient Margaret Landis, Spring 2013.

Most Influential Faculty Member for Gold Axe Recipient Nicholas Kutsop, Fall 2013.

SELECTED PROFESSIONAL SERVICE ACTIVITIES:

Director, NAU Space Grant Program and Associate Director, Arizona Space Grant Consortium.

Member, NAU Undergraduate Research Committee, 2012-present.

American Astronomical Society (AAS), Committee on the Status of Women in Astronomy, 1995-1998; Member, Review Panel for AAS Small Travel Grants Program, 2000-2001.

American Astronomical Society Division for Planetary Sciences (DPS): Press Officer, 1993-1999; Member, Education Committee, 1993-1996; Member, Executive Committee 1999-2002; Treasurer, 2004-2007; Prize Committee 2013-2014.

Geological Society of America, Judge for GSA Dwornik Student Awards at the Lunar and Planetary Science Conference 1992-1993, 1999-2000, 2009, 2011-2014. Planetary Geology Division Nominating Committee, 1997. Associate Editor for planetary science papers, *Geological Society of America Bulletin*, 2009-2014.

Meteoritical Society Barringer Medal Selection Committee 2006-2010. Chair in 2010.

Planetary Crater Consortium. Chair 2009-2015; Ex-Officio member of Executive Council 2015-2016.

Committee on Undergraduate Research (Member since 2008). Councilor, Physics and Astronomy Division (2009-2018), Division Newsletter Editor (2010-2015), Division Secretary (2015-2018). Chair, CUR Fellows Committee (2015-2018). Review astronomy applications for Posters on the Hill and review astronomy-related articles for the *CUR Quarterly* journal.

Reviewer of manuscripts submitted to professional journals, including *Icarus*, *Journal of Geophysical Research-Planets*, *Nature*, *Science*, *Geophysical Research Letters*, *EOS*, *Geology*, *Astrophysical Journal Letters*, *Geological Society of America Bulletin*, *Planetary and Space Science*, *Nature Communications*, and *Meteoritics and Planetary Science*.

Have served as an external reviewer for proposals submitted to NASA, NSF, and research funding agencies in Canada and Europe. Have served on review panels for NASA and NSF, including NASA Astrobiology Institute, NASA Discovery Concept Study Report, NASA Lunar Advanced Science and Exploration Research Program, NASA Mars Data Analysis Program, NASA Mars Scout EPO, NASA Minority University and College Education Partnership Initiative, NASA Outer Planets Research Program, NASA Planetary Data System Senior Review, NASA Planetary Geology and Geophysics Program, NASA Planetary Science Division Senior Review, NASA Supplemental Education and Public Outreach Program, NSF Planetary Astronomy Program, and NSF Transforming Undergraduate Education in Science, Technology, Engineering, and Mathematics Program.

Scientific co-director of the Lunar and Planetary Institute's Summer Intern Program, 1988-1990.

Member, NASA Planetary Data System Working Group, 2002-2006.

Member, NASA/Univ. Iowa Mars Exploration Rover field test, Grey Mountain, AZ, Oct. 2-4, 2003.

Guest editor of October 2006 issue of *Meteoritics and Planetary Science*, special Proceedings issue of Workshop on the Role of Volatiles and Atmospheres on Martian Impact Craters.

Member, Mars Exploration Program Advisory Group Special Regions Science Analysis Group, 2005-2006 and 2013-2014.

Participant, Committee on Space Research (COSPAR) Colloquium on Mars Special Regions, 2007.

Conference Organizing Committees:

- Served 6 times on Program Committee for the Lunar and Planetary Science Conference between 1991 and 2001.
- Chair, organizing committees for Mars Crater Consortium Meetings 1 through 12, Flagstaff, AZ (1997-2009).
- Co-organizer, special session on “The Role of Volatiles in the Geology and Geomorphology of Impact Craters on Mars”, Fall 2004 American Geophysical Union meeting, San Francisco, CA, Dec. 15, 2004.
- Chair, organizing committee for Workshop on the Role of Volatiles and Atmospheres on Martian Impact Craters, JHU-APL, Laurel, MD, July 11-14, 2005.
- Member, scientific organizing committee for First International Conference on Impact Cratering in the Solar System, Noordwijk, The Netherlands, May 8-12, 2006.
- Co-chair, Workshop on Surface Ages and Histories: Issues in Planetary Chronology, Houston, TX, May 21-23, 2006.
- Chair, organizing committee for Lunar Crater Consortium Meeting I, Flagstaff, AZ, Sept. 28, 2009.
- Member, scientific organizing committee for the 41th Division for Planetary Sciences meeting, Fajardo, Puerto Rico, Oct. 5-9, 2009.
- Chair, organizing committee for Planetary Crater Consortium Meetings 1 through 6, Flagstaff, AZ, 2010-2015.
- Member, local organizing committee for Planetary Defense Conference, Flagstaff, AZ, April 15-19, 2013. Organized and led field trips to Meteor Crater on April 17 for conference participants.
- Member, scientific organizing committee for 46th Division for Planetary Sciences meeting, Tucson, AZ, Nov. 10-14, 2014.
- Member, scientific organizing committee, Conference on Issues in Crater Studies and Dating of Planetary Surfaces, Laurel, MD, May 19-22, 2015.
- Co-convenor, NASA Planetary Data Workshop, Flagstaff, AZ, June 8-11, 2015.
- Member, scientific organizing committee, Bridging the Gap III: Impact Cratering in Nature, Experiment, and Modeling, Freiburg, Germany, Sept. 21-26, 2015.

PUBLIC OUTREACH:

- Have given 83 public talks since 2002.
- Have given 17 talks to pre-college students since 2002.
- Have given 80 interviews with local, regional, national, and international media outlets since 2002.