

DANIEL JONES MORGAN: Curriculum Vitae

Updated November 1, 2015

Department of Earth and Environmental Sciences

Vanderbilt University

PMB 351805

2301 Vanderbilt Place

Nashville, TN 37235, USA

Office: (615) 343-3154

dan.morgan@vanderbilt.edu<https://my.vanderbilt.edu/danmorgan/>

Academic Appointments*Vanderbilt University*

2015 – Present Associate Dean, College of Arts & Science

2009 – Present Senior Lecturer, Department of Earth & Environmental Sciences

University of Washington

2007 Instructor, Program on the Environment

2003 – 2009 Graduate Student, Teaching Assistant, and Research Assistant

Education

Ph.D. University of Washington, Seattle (Geological Sciences), 2009

Supervised by Dr. Jaakko Putkonen, Dr. John Stone, and Dr. Eric Steig

Dissertation: "Stability of unconsolidated deposits in the McMurdo Dry Valleys, Antarctica"
Environmental Management Graduate Certificate, 2008

B.A. Pomona College (Geology and Mathematics), 2002

Research and Teaching Interests

Surface processes, landscape evolution, glacial geology, age of landforms, rate of geomorphic processes, exposure dating, cosmogenic nuclides, lichenometry, detrital zircon geochronology, structural geology, tectonic geomorphology, life cycle assessments, sustainable use of natural resources, role of science in environmental decision making

Honors and Recognition

Chancellor Heard Greek Awards Faculty Member of the Year, Vanderbilt University, 2015

The Ernest A. Jones Faculty Advisor Award, College of Arts and Science, Vanderbilt University, 2014

Junior Faculty Teaching Fellow, Center for Teaching, Vanderbilt University, 2014 – 15

Howard Coombs Fellowship for Excellence in Teaching, Department of Earth and Space Sciences, University of Washington, 2008

Richard E. Fuller Fellowship for Research, Department of Earth and Space Sciences, University of Washington, 2006

Mason L. Hill Award, Department of Geology, Pomona College, 2002

Don Zenger Award, Department of Geology, Pomona College, 2002

Current, Pending, and Recent Support

Current

Co-PI: "Collaborative Research: Clarifying the Ingredients and Significance of Nonlocal Versus Local Sediment Transport on Steepland Hillslopes." Source of Support: NSF, Award Number: 1420898, Total Award Amount: \$307,932 (\$173,374 VU award). Total Award Period Covered: 8/1/2014 – 7/31/2017. Co-PIs David Furbish (VU) and Josh Roering (U. of Oregon).

PI: Undergraduate Research Supervision Grant. Source of Support: Vanderbilt University. Total Award Amount: \$2,000. Total Award Period Covered: June 1, 2015 – June 31, 2016. In conjunction with undergraduate student receiving a \$5,000 Vanderbilt University Summer Research Program award.

Pending

Co-PI: "Collaborative Research: Long Term Sublimation and Preservation of Two Separate, Buried Glacier Ice masses, Ong Valley, Southern Transantarctic Mountains." Source of Support: NSF, Total Award Amount: \$465,351 (\$111,848 VU award), Total Award Period Covered: 9/1/2017 – 8/31/2020. Co-PIs Jaakko Putkonen (UND) and Greg Balco (BGC). Grant has been recommended for funding by program manager. Due to logistical constraints, field work and grant will not start until 2017.

In Preparation

Co-PI: "Collaborative Research: Developing Remote Sensing Techniques to Quantify Land Surface Age and Stability in the Transantarctic Mountains." Source of Support: NSF, Total Award Amount: \$361,285 (\$139,279 VU award), Total Award Period Covered: 6/1/2017 – 5/31/2020. Resubmission expected April 15, 2016 with Co-PIs Mark Salvatore (U. Michigan-Dearborn) and Greg Balco (BGC).

Recent

Research Personnel for Vanderbilt University Discovery Grant, "A Negotiated Settlement: An Interdisciplinary Investigation of a Planned Colonial Town in the Andean Highlands of Peru." Source of Support: Vanderbilt University, Total Award Amount: \$99,948, Total Award Period Covered: 5/2010 – 12/2012.

Research Personnel for NSF #0838968, "Collaborative Research: Systematic Analysis of Landscape Evolution and Surface Ages in Transantarctic Mountains." Source of Support: NSF, No award to DM. Total Award Period Covered: 9/1/2009 – 8/31/2012. Co-PIs Jaakko Putkonen (UND) and Greg Balco (BGC).

Peer Reviewed Publications (* denotes student author)

Published

- Bibby, T, J. Putkonen, **D. Morgan**, G. Balco, and D. Shuster (*in review*). Million year old ice found under meter-thick debris layer in Antarctica. *Journal of Geophysical Research – Earth Surface*.
- Putkonen, J., **D. Morgan**, and G. Balco (2014). Boulder weathering in McMurdo Dry Valleys, Antarctica. *Geomorphology*, Volume 219: 192-199, ISSN 0169-555X, doi:10.1016/j.geomorph.2014.05.012.
- O’Neal, M. A., N. Legg, B. Hanson, **D. J. Morgan**, and A. Rothgeb* (2013). Lichenometric dating of rock surfaces in the northern Cascade Range, USA. *Geografiska Annaler*, Volume 95, Issue 3, pages 241-248, September 2013, DOI: 10.1111/geoa.12012.
- Putkonen, J., **D. J. Morgan**, and G. Balco (2012). Regolith transport quantified by braking block, McMurdo Dry Valleys, Antarctica. *Geomorphology*, Volume 155–156: 80–87, ISSN 0169-555X, doi:10.1016/j.geomorph.2011.12.010.
- Morgan, D. J.**, J. Putkonen, G. Balco, and J. Stone (2011). Degradation of glacial deposits quantified with cosmogenic nuclides, Quartermain Mountains, Antarctica, *Earth Surface Processes and Landforms*, 36: 217-228, doi:10.1002/esp.2039.
- Morgan, D. J.**, Putkonen, G. Balco, and J. Stone (2010). Quantifying regolith erosion rates with cosmogenic nuclides ^{10}Be and ^{26}Al in the McMurdo Dry Valleys, Antarctica, *Journal of Geophysical Research*, 115, F03037, 17 PP., doi:201010.1029/2009JF001443.
- Putkonen, J. Balco, G.B., and **D. J. Morgan** (2008). Slow regolith degradation without creep determined by cosmogenic nuclide measurements in Arena Valley, Antarctica. *Quaternary Research*, 69, 242–249, doi:10.1016/j.yqres.2007.12.004.
- Putkonen, J., M. Rosales*, N. Turpen*, **D. Morgan**, G. Balco, and M. Donaldson* (2007). *Regolith transport in the Dry Valleys of Antarctica*, in Antarctica: A Keystone in a Changing World – Online Proceedings of the 10th ISAES, edited by A. K. Cooper and C. R. Raymond et al., USGS Open-File Report 2007-1047, Short Research Paper 103.

In Preparation

- Morgan, D. J.**, and J. Putkonen, (In preparation for submission spring 2016). Moraine degradation rates quantified with cosmogenic ^{10}Be . For submission to *Geology*.
- Morgan, D. J.**, S. Wernke, R. McCracken*, and M. O’Neal (In preparation for submission summer 2016). Developing a lichen growth rate curve from archaeological sites, Colca Valley, Peru. For submission to *Arctic, Antarctic, and Alpine Research*.
- Balco, G., **Morgan, D.**, and J. Putkonen (In preparation for submission summer 2016). Calculating erosion rates over multiple time scales with cosmogenic nuclides ^{26}Al , ^{10}Be , and ^{21}Ne . For submission to *Journal of Geophysical Research – Earth Surface*.

Reports

Morgan, D. J., Born, B., Cook, R., Radenovic, H., and S. Renzi, (2007). *Seattle Food System Enhancement Project: Greenhouse Gas Emissions Study*. University of Washington, Program on the Environment Certificate in Environmental Management Keystone Project, 2006-2007. City of Seattle, Department of Neighborhoods.

Cook, R., **Morgan, D. J.**, Radenovic, H., Renzi, S., and B. Born, (2007). *Seattle Food System Enhancement Project*. University of Washington, Program on the Environment Certificate in Environmental Management Keystone Project, 2006-2007. City of Seattle, Department of Neighborhoods.

Abstracts (* denotes student author and + denotes student presenter). The most recent 5 years are shown. A full list is available upon request.

Morgan, D. J., S. Sams*, J. Liu*, K. Edwards*, C. Hedberg*, K. Ringger*, M. Stocky*, A. Ball*, M. Diamond*, J. Cox*, E. Orland*, F. Lyles*, T. Bibby, C. Giusti*, E. Hoeft*, J. Putkonen, and G. Balco (2015). A Method for Constraining Glacial Boulder Exposure Ages with Bedrock Erosion Rates Utilizing Cosmogenic Ne-21 from the Central Transantarctic Mountains. *American Geophysical Union, Fall Meeting 2015*. Abstract #PP11A-2214.

Sams, S.*+, D. Morgan, G. Balco, J. Putkonen, and T. Bibby (2015). Applications of Cosmogenic He-3 and Ne-21 Dating to Glacial Moraines in Antarctica and California *American Geophysical Union, Fall Meeting 2015*. Abstract #PP11A-2213.

Liu, J. *+, D. Morgan, L. Claiborne, A. Padilla, K. Edwards*, J. Putkonen, T. Bibby, and J. Cribb (2015). Zircon Geochemistry of Granitic Rocks from Ong Valley and Moraine Canyon in the Central Transantarctic Mountains, Antarctica. *American Geophysical Union, Fall Meeting 2015*. Abstract #V23B-3118.

Edwards, K. L.*+, A.J. Padilla*, A. Evans*, **D. J. Morgan**, G. Balco, J. Putkonen, and T. Bibby* (2014). Provenance of glacial tills in Ong Valley, Antarctica, inferred from quartz cathodoluminescence imaging, zircon U/Pb dating, and trace element geochemistry. *American Geophysical Union, Fall Meeting 2014*. Abstract #EP12B-07.

Hedberg, C. P.*+, **D. J. Morgan**, J. Cox*, G. Balco, J. Putkonen, and T. Bibby* (2014). Further Investigations of Cosmogenic Ne-21 Exposure Ages of Glacial Boulders Constrained by Local Bedrock Erosion Rates in Ong Valley, Antarctica. *American Geophysical Union, Fall Meeting 2014*. Abstract #C53C-0334.

Bibby, T.*+, J. Putkonen, **D. J. Morgan**, and G. Balco (2014). Age and stability of sublimation till over buried glacier ice, inferred from ²¹Ne measurements, Ong Valley, Antarctica. *American Geophysical Union, Fall Meeting 2014*. C53C-0333.

Putkonen, J., **D. J. Morgan**, and G. Balco (2014). Long-term Boulder and Rock Fragment Weathering in McMurdo Dry Valleys, Antarctica. *American Geophysical Union, Fall Meeting 2014*. Abstract #EP33B-3645.

Bibby, T. *+, J. Putkonen, **D. J. Morgan**, and G. Balco (2014). Production and preservation of sublimation till determined with ²⁶Al and ¹⁰Be, Ong Valley, Antarctica. Paper No. 92-3, *2014 GSA Annual Meeting in Vancouver, BC (19 – 22 October 2014)*.

- Morgan, D. J.**, G. Balco, J. Putkonen, T. Bibby*, C. Giusti*, A. Ball*, C. Hedberg*, M. Diamond*, and K. Ringger* (2013). Cosmogenic Ne-21 exposure ages of glacial boulders constrained by local bedrock erosion rates in Ong Valley, Antarctica. *American Geophysical Union, Fall Meeting 2013*. Abstract #EP41A-0795.
- Putkonen, J., C. Giusi*, E. Hoefft*, **D. Morgan**, and G. Balco (2013). Intriguing glacial flow patterns, Moraine Canyon, Antarctica. Paper No. 104-2, *2013 GSA Annual Meeting in Denver, CO (27 – 30 October 2013)*.
- Putkonen, J., **D. J. Morgan**, and G. Balco (2012). Landscape degradation and regolith transport in McMurdo Dry Valleys of Antarctica. *American Geophysical Union, Fall Meeting 2012*, Abstract #EP53E-1081.
- Morgan, D. J.** and J. Putkonen (2012). Moraine degradation rates quantified with cosmogenic Be-10 from soil profiles in Bloody Canyon, CA. Abstract ID# 212503, *2012 GSA Annual Meeting in Charlotte, NC (4–7 November 2012)*.
- van Stolk, C. * +, **D. J. Morgan**, and S. Wernke (2012) Paleoclimate applications to an archaeological site in southern Peru. Abstract ID# 212022, *2012 GSA Annual Meeting in Charlotte, NC (4–7 November 2012)*.
- Putkonen, J., R. Madoff, and **D. Morgan** (2012). Do moraines degrade, what evidence do we have? Abstract ID# 211222, *2012 GSA Annual Meeting in Charlotte, NC (4–7 November 2012)*.
- van Stolk, C.* +, **D. J. Morgan**, and S. Wernke (2012) Paleoclimate applications to an archaeological site in southern Peru. *Archaeological Sciences of the Americas Symposium (5 – 6 October 2012)*.
- Putkonen, J., T. Bibby*, **D. Morgan**, G. Balco, C. Giusti, and R. Matheney (2012). Geomorphology and regolith erosion rates from ice-free valleys in the Southern Transantarctic Mountains. *XXXII Scientific Committee on Antarctic Research (SCAR) and Open Science Conference, July 2012*.
- Grady, C.* +, and **D. J. Morgan** (2011). Modeling moraine degradation in the Sierra Nevada Mountains, California with a 1-D linear diffusion equation. *American Geophysical Union, Fall Meeting 2011*, Abstract #EP23C-0765.
- McCracken, R.G.* +, **Morgan, D. J.**, and S.A. Wernke (2011). Use of archaeological sites in development of lichen growth curve, Colca Valley, Peruvian Andes. Paper No. 102-16, *2011 GSA Annual Meeting in Minneapolis, MN (9-12 October 2011)*.
- Bibby, T.* +, Putkonen, J., and **D. J. Morgan** (2011). What could possibly happen in a million years? Landscape evolution in the southern Transantarctic Mountains. Paper No. 102-7, *2011 GSA Annual Meeting in Minneapolis, MN (9-12 October 2011)*.
- Morgan, D. J.**, J. Putkonen, and G. Balco (2011). Determining rates of geomorphic processes over multiple timescales with cosmogenic nuclides Al-26, Be-10, and Ne-21 in Wright Valley, Antarctica. *11th International Symposium on Antarctic Earth Sciences*, University of Edinburgh, Scotland.

Students Supervised

Undergraduate students at Vanderbilt University

Honors Senior Thesis students

Sarah Sams, 2015-16: Exposure age of glacial tills, Antarctica, California

Katherine Edwards, 2014-15: Provenance of glacial tills, Antarctica

Kyle Broach, 2011-12: Bioturbation rates under sea ice, Explorer's Cove, Antarctica

Catherine Grady, 2011-12: Degradation of glacial moraines in the Sierra Nevada, CA

Summer Undergraduate Research Projects

Sarah Sams, 2015: Cosmogenic nuclide exposure ages, California, Antarctica
Julia Liu, 2015: Zircon U-Pb ages of bedrock and glacial tills, Antarctica
Katherine Edwards, 2014: Provenance of glacial tills, Antarctica
Courtney van Stolk, 2012: Lichenometry and cores, 4-weeks of field work in Peru
Catherine Grady, 2011: Hillslope modeling and 3-weeks of field work in Mono Lake, CA
Rebecca McCracken, 2010: Lichenometry and 3-weeks of field work in Peru

Independent and Directed Study

Evan Miranda, fall 2015 – current: Zircon U-Pb ages of glacial tills
Katherine Norskog, fall 2014 – spring 2015: Quartz microtextures on SEM
Carson Hedberg, fall 2013 – fall 2014: Cosmogenic nuclide sample preparation and analysis
Ashley Ball, spring 2013: Cosmogenic nuclide sample preparation and analysis
Kyle Ringger, spring 2013: Cosmogenic nuclide sample preparation and analysis
Michael Diamond, spring 2012: Cosmogenic nuclide sample preparation and analysis
Ziquan Fan, spring 2012: Life cycle assessment of smartphones
Michael Diamond, fall 2011: Glacial advance and retreat from satellite images
Rebecca McCracken, spring 2011: Lichenometry from archeological sites in Peru
Mitchell Stocky, spring 2011: Cosmogenic nuclide sample preparation and analysis

Graduate students

Megan Patrick (Vanderbilt University, MS 2016 expected) – Committee member
Tyler Doane (Vanderbilt University, MS 2014) – Committee member
Siobhan Fathel (Vanderbilt University, MS 2013) – Committee member
Lauren Williams (Vanderbilt University, MS 2013) – Committee member
Allison Rothgeb (University of Delaware, MS 2012) – Reader

Courses Taught

Vanderbilt University (Courses were recently renumbered to 4-digit system, old numbers in parentheses)

ENVS/EES 1001 (099) Antarctic Exploration, the Nature of Virtue, and the Search for Heroism in Modern Life, spring 2014, 2015, 2016 – seminar for first-year students, 15 students
EES 1510 (101) Dynamic Earth: Introduction to Geological Sciences, one semester each year, 2009 – 2015, 130 students
EES 1510L (111) Dynamic Earth Lab, fall 2009 – spring 2012, 18-20 students per lab section
EES 1030L (113) Oceanography Lab, fall 2009 – spring 2015, 18-20 students per lab section
EES 3340 (240) Structural Geology, each spring semester 2009 – current
EES 3865 (210) Field Investigations, May 2013, 2015 – “Maymester” course in New Zealand, 10-20 students
EES 4961 (299) Senior Seminar, spring 2015, 2016
Vanderbilt Visions, fall 2010 – current: mentor for first-year undergraduate students

Osher Lifelong Learning Institute at Vanderbilt

Fall 2014: “Exploring Antarctica”

University of Washington

Instructor, Program on the Environment

ENVIR 100 Environmental Studies 100: Interdisciplinary Foundations, spring 2007

Co-taught with economics professor Yoram Bauman

Teaching Assistant, Department of Earth and Space Sciences

ESS 101 Introduction to Geological Sciences, 2003-04 (3 quarters), winter 2008

ESS 209 Geomorphological Expedition to Nepal (3-week field course in Nepal), September 2007

ESS 210 Physical Geology, spring 2005

ESS 211 Physical Processes of the Earth, fall 2006

ESS 304 Volcanoes and Glaciers of the Pacific Northwest, summer 2004

ESS 400 Field Geology (6-week field course in SW Montana), summer 2007 and 2008

ESS 426 Fluvial Geomorphology, spring 2008

Service

Vanderbilt

Immersion Committee, Office of the Provost (2015 – current): Strategic Plan task is to define and design experiential learning curriculum for all undergraduates with implementation fall 2018

Faculty Advisory Committee for International Education, Office of the Provost (2015 – current):

Review study abroad options for students, define immersion criteria for study abroad

Admissions Committee, College of Arts & Science (2015 – current): Review and select merit-based Honors scholarships during admissions process

Director of Honors Program, College of Arts & Science (2015 – current): Direct College Scholars

Honors Program for College of Arts & Science, administer Cornelius Vanderbilt Honors

Scholarships, oversee Departmental Honors Programs

QEP Committee, Office of the Provost (2015 – current): Review, select, and implement a new curriculum as the Quality Enhancement Plan (QEP) for the 10 year review of Vanderbilt's accreditation by SACSCOC

Officer Education Committee, Office of the Provost (2015 – current): Oversight of campus ROTC programs

Director of Undergraduate Studies, Department of Earth and Environmental Sciences (2012 – 2015):

Advise all undergraduate majors and minors, course scheduling, curriculum revision, develop guidelines for senior honors thesis projects, teaching assistants, and research assistants, review scholarship applications

Committee on Educational Programs, College of Arts & Science (2014 – 2015): review proposals for new academic programs, program changes

Environmental and Sustainability Studies Advisory Committee, College of Arts & Science (2014 – current): develop new minor and major in Environmental and Sustainability Studies

Member of the Cumberland Project (2011 – current): Vanderbilt University's project to develop a curriculum on environmental studies and sustainability

Faculty sponsor for *Geology Club* (2009 – current): undergraduate club for the Earth and Environmental Sciences department

Vanderbilt Visions, Dean of the Commons (fall 2010 – current): Faculty mentor for first-year undergraduate students

Faculty interviewer for Vanderbilt Visions, Dean of the Commons (spring 2011 – current): Review and interview students

Vanderbilt Visions review committee, Dean of the Commons (2012-2013): review Vanderbilt Visions and VUcept programming
Vanderbilt Commons review committee, Dean of the Commons (2014): develop curriculum goals for first-year student living-learning community
MOSAIC Multicultural Recruitment weekend, Office of Undergraduate Admissions (spring 2010 – current): Faculty lecturer and discussion leader for multicultural recruitment weekend
Faculty adviser for Mayfield Living and Learning Community (2012-13, 2014-15), Advise a student themed service housing group, 10 students

University of Washington

Graduate Student Representative, Department of Earth and Space Sciences, 2008-09.
Graduate Student Representative, Advisory Board for the Program on the Environment, 2007-09, and Steering Committee for the Environmental Management Certificate Program, 2006-09, Supervise undergraduate major in environmental studies and graduate certificate programs.

Community

Peer-reviewer for: Geology, Global Planetary Change, Earth and Planetary Science Letters
Grant-reviewer for the National Science Foundation

Workshops and Professional Development

"Interdisciplinary Antarctic Earth Sciences Meeting," September 20-22, 2015, Loveland, CO. This meeting brings together the broader earth science community to build collaborations, share resources, and develop new research ideas in the Transantarctic Mountains.
"Transantarctic Mountains Science Meeting," September 23-24, 2013, University of Minnesota. This meeting brings together the broader scientific community to build multidisciplinary collaborations in the Transantarctic Mountains.
"Teaching Oceanography," June 18-20, 2013, City College of San Francisco. This workshop is part of the On the Cutting Edge professional development program for current and future geoscience faculty.
"Engineering, Sustainability, and the Geosciences," Colorado School of Mines, March 6-8, 2013. This workshop is part of the InTeGrate project for interdisciplinary teaching of geoscience for a sustainable future.
"Early Career Geoscience Faculty: Teaching, Research, and Managing Your Career," June 12-17, 2011, College of William and Mary, Williamsburg, VA. This workshop is part of the On the Cutting Edge professional development program for current and future geoscience faculty.
"Preparing for an Academic Career in the Geosciences: Workshop for Graduate Students and Post-Doctoral Fellows," July 31-August 3, 2008, National Weather Center, University of Oklahoma. This workshop is part of the On the Cutting Edge professional development program for current and future geoscience faculty.

Invited Talks, Guest Lectures and Outreach Presentations

"Governing the Commons: the Antarctic Treaty and the South China Sea" McGill Hour Dialogue Series, McGill Hall, Vanderbilt University, November 5, 2015.
"Exploring Antarctica" Williamson County Public Library, October 9, 2015.
"Contrary landscapes: Age and activity of landforms in Antarctic Dry Valleys" University of Pennsylvania, Department of Earth and Environmental Science, department seminar January 31, 2014.

- “Principles of Hydraulic Fracturing” Vanderbilt University, SPEAR club, October 7, 2013.
- “Research and Life in Antarctica” Vanderbilt multicultural recruitment weekend (MOSAIC) March 2010, 2011, 2012, 2013, 2014.
- “Geology of Tennessee” Vanderbilt University, Wilskills Outdoor Club, October 24, 2012.
- “Geomorphology of Antarctica” University of North Dakota, Department of Geology and Geological Engineering, department seminar, June 22, 2011
- “Why are rivers fun to paddle?” Vanderbilt University, Wilskills Outdoor Club, February 2010
- “How will Antarctica react to future climate change?” Vanderbilt University, Students Promoting Environmental Awareness and Recycling (SPEAR), November 2009
- “Reconstruction of Former Glaciers” University of Washington, ESS 431: Principles of Glaciology, fall 2007, fall 2008
- “Petroleum Geology” University of Washington, ENVIR 100: Interdisciplinary Foundations, fall 2007, winter 2008, fall 2008, winter 2009
- “Introduction to Life Cycle Assessment” University of Washington, URBDP 520: Quantitative Methods in Urban Design and Planning, fall 2007
- “Petroleum Geology of the Arctic National Wildlife Refuge” University of Washington, Program on the Environment, ENVIR 450: Choices and Change in the Arctic National Wildlife Refuge, summer 2005, summer 2006
- “Geology of Auckland, New Zealand” University of Washington, Program on the Environment and UW Tacoma Urban Studies, ENVIR 400: Comparative Perspectives on Cities & the Environment: Seattle, WA, Auckland, New Zealand, and Sydney, Australia, January 2006
- “Antarctica: Life and Research at the Bottom of the Earth” Dina Pigott’s 2nd grade class, Epiphany School, Seattle, WA, February 2006
- “Field Work and Camp Life in Antarctica” Yakama Tribal School, Toppenish, WA, May 2005
-

Professional Affiliations

American Geophysical Union
Geological Society of America
National Association of Geoscience Teachers