

PAUL E. BUCK

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EMPLOYMENT (since 2005, Buck has had a dual/joint appointment on the faculties of Nevada State College and the Desert Research Institute)

2005-present	Associate Professor, Nevada State College
2001-present	Associate Research Professor, Desert Research Institute, Las Vegas
2002-2005	Part-time Instructor, Nevada State College, Henderson, Nevada
1993-2010	Associate Graduate faculty, Department of Anthropology and Ethnic Studies, University of Nevada Las Vegas
1991-2001	Assistant Research Professor, Desert Research Institute Las Vegas

EDUCATION

Ph.D.	Anthropology, University of Washington
M.A.	Anthropology, University of Washington
B.A.	Anthropology, California State University Chico

BIOGRAPHICAL SKETCH

Dr. Buck is an anthropologist and educator. He has conducted research on a wide variety of archaeological and anthropological topics in western North America and Egypt for almost 35 years. His research interests include: Prehistoric human adaptation to arid environments of western North America, the transition from food collecting to food producing economies in the Southwestern U.S. and Egypt, the impact of technological change on prehistoric cultures, and applications of remote sensing and geoarchaeology to prehistory. To make a broader impact in Nevada and the nation, he has also developed and funded in service teacher training projects in STEM fields, developed curricula for K-12 students for a planned outdoor science school, and focused on getting more women and underrepresented students into STEM fields.

ARCHAEOLOGICAL RESEARCH INTERESTS

- Hunter/gatherer adaptations in arid and subarid environments of Western North America;
- The evolution of complex society, agricultural systems and urbanism in the SW U.S. and Egypt
- Remote sensing and geophysical prospection, including applications of multispectral scanner systems to archaeological site detection and characterization; spectral properties of archaeological materials; ground-penetrating radar.
- Site formation processes, microartifact studies, reconstruction of regional landscapes and processes affecting sites in arid lands; lithic analyses.

SCIENCE EDUCATION, DIVERSITY, EQUITY, AND INCLUSIVITY FOCUS

- Science Education reform;
- K-12 science education focusing on authentic research experiences for teachers and students;
- Increasing diversity in STEM fields in K-16 institutions

RESEARCH GRANTS AND CONTRACTS (brief summary, see below for list of individual awards):

Buck has been awarded **approximately \$4 million** over the past three decades from agencies such as US Department of Education, National Science Foundation, NASA, and the US Department of Defense for archaeological research, remote sensing research, science education, and curriculum development projects. He has published on remote sensing research and other archaeological projects in international, national, and regional peer-reviewed journals. Buck currently has on-going field research in the archaeology of the prehistoric Anasazi in NW Arizona of the Mt. Trumbull region.

Buck is currently the PI on **NSF's GEOPATH** program, a 3 year **\$376,327** effort funded by NSF (proposal 1801605, M Jones NSF is program manager). "Nevada's GeoGateway Program" is designed to create a structured pathway linking academic and research institutions in southern Nevada to train a new generation of geoscientists to serve the region and nation. The effort will recruit and engage students taking geoscience-related coursework and those graduating with Associate in Science degrees, channeling them into Nevada State College's (NSC) four-year Environmental and Resource Science (ERS) program. The cooperative project will leverage commitments and staff from the two-year College of Southern Nevada (CSN) and the Desert Research Institute (DRI)-the research arm of the state higher education system-and take advantage of scientific infrastructure already supported by NSF, the Nevada Climate-ecohydrology Assessment Network (NevCAN).

Buck was **Principal Investigator** of research about sub pixel detection of archaeological artifacts funded by a 3 yr \$372,786 award from NASA (2013 -2017, "Sub pixel detection of archaeological materials using NASA satellite and aircraft data" award #NNX13A66G). Buck was PI on **Nevada NASA Space Grant Consortium Higher Education – Curriculum Development** award "A multi-week learning module on remote sensing for introductory environmental science and geology classes," NASA Space Grant NNX15AI02H. The award period was September 1, 2016 through August 31, 2017. The total amount of \$40,917 provided in federal funds with cost share \$40,917 in non-federally-funded support. Buck was **Principal Investigator for a NASA** (2009-2013) for Space Archaeology, a 3 year \$290,000 research award with significant involvement of undergraduates and high school students.

Science education. In addition to his research efforts, Buck has been involved in a number of science education projects and other efforts to promote science inquiry in a variety of scientific fields, including archeology. He was the Principal Investigator of the **Shadow Ridge High School/Tule Springs Earth Science Education Project** (Clark County School District) funded by NSF to develop a new earth science honors course based on authentic research for 9th grade students (NSF award #0331249). He was the lead education consultant for development of the environmental education curriculum for 5th grade students at the **Red Rock Desert Learning Center** a proposed residential outdoor science school planned to open in Red Rock Canyon National Conservation Area near Las Vegas. He directed the **Nevada Science Teacher Enhancement Project**, a three year in-service teacher enhancement project program funded by the National Science Foundation's Teacher Enhancement Program (grant number ESI-9731285). Buck was **Project Director for the NSHE's K-12 education/outreach program** as part of the NSHE's \$15 million 5 year EPSCoR RTIII award.

Diversity. Buck is also committed to involving a greater diversity of students in math and science. As Director of the **Increasing Diversity in Science in Nevada** program (a part of the NSHE's current NSF EPSCoR grant), he led after school science enrichment programs for middle school and high school students, prepared freshman minority students for college in the NSHE, and provided support for freshman students at UNR and UNLV.

SCHOLARSHIP—BOOK CHAPTERS, PEER REVIEWED ARTICLES

- Buck, Paul E.** 2019. “Prehistoric Population Change of the Mt. Trumbull, AZ Area” *The Kiva*, V. 85-4; PP. 390-411. This was an invited article based on conference proceeding in 2018. Follow this link to read the full article on line.
<https://www.tandfonline.com/eprint/BRTDR3CHNTHBD5TESFT6/full?target=10.1080%2F00231940.2019.1690318&>
- Buck, Paul E.**, 2016. Chapter 2: Site geomorphology and regional fluvial reconstruction and history. In “Kom el-Hisn (ca. 2500–1900 BC): An Ancient Settlement in the Nile Delta” Robert J. Wenke, Richard W. Redding, and Anthony J. Cagle (eds.), Lockwood Press, Atlanta Georgia USA pp. 53-70.
- Buck, Paul** and D. Sabol, 2014. Prehistoric Land Use in the Mt Trumbull Region, NW Arizona, USA. With junior author Dr. Don Sabol (DRI). In *Human Environment Interactions - Volume 2: Reconstructing the Natural and Anthropogenic Landscape* (Springer Briefs in Earth System Sciences) Michelle Goman, editor.
- John A. Arnone III, Paul S. J. Verburg, Dale W. Johnson, Jessica D. Larsen, Richard L. Jasoni, Annmarie J. Lucchesi, Candace M. Batts, Christopher von Nagy, William G. Coulombe, David E. Schorran, **Paul E. Buck**, Bobby H. Braswell, James S. Coleman, Rebecca A. Sherry, Linda L. Wallace, Yiqi Luo, and David S. Schimel, 2008, “Future CO₂ Uptake Suppressed by Synchronous and Lagged Ecosystem Responses to Extreme Year” *Nature*.
- Buck, P.E.**, D. Sabol, and A.R. Gillespie, 2003, “Subpixel Artifact Detection Using Remote Sensing,” *Journal of Archaeological Science* 30:973-989.
- Buck, P.E.** , 2003. “Authentic Research Experiences for Nevada High School teachers and students,” *Journal of Geoscience Education* 51(1):48-53.
- Buck, P.E.**, B. Hockett, T. Goebel, K. Graf, L. Perry, G. Greigo* and E. Dillingham, 2002, “Oranjeboom Cave: a Single Component Eastgate Site in Northeastern Nevada” *Utah Archaeology* 15(1):99-112.
- Buck, Paul E.** and L. Perry, 1999. A Late Basketmaker III Storage and Habitation Site near Hurricane, Utah. *Kiva* 64(4):471-494.
- Buck, Paul E.**, 1999. Review of Ground-Penetrating Radar: An Introduction for Archaeologists, by L. B. Conyers and D. Goodman. *American Antiquity* 64(1):183-184.
- DuBarton, A. and **P. Buck**, 1998. Twisted Technology: Cordage from Pintwater Cave. *Nevada Archaeologist* 16:40-50.
- Buck, Paul E.**, 1998. Review of Archaeological Investigations at the Breakfast Canyon Rockshelters, Death Valley National Monument, Inyo County, California: Shoshone Food Storage and Horticulture in the Southwestern Great Basin, by R. Yohe and A. Valdez. *Journal of California and Great Basin Anthropology* 20(1):129-131. (RJ).
- Buck, Paul E.** and A. DuBarton, 1994. A Report of Archaeological Investigations at Pintwater Cave, Nevada during the 1963-64 Season. *Journal of California and Great Basin Anthropology* 16:2 (160-180).
- Paul E. Buck**, 1990. *Structure and Content of Old Kingdom Archaeological Deposits in the Western Nile Delta, Egypt: a Geoarchaeological Example from Kom el-Hisn*. Unpublished Ph.D. dissertation, University of Washington, Seattle.
- Wenke, Robert J., **Paul E. Buck**, H. Hamroush, M. Kubisiewicz, K. Kroeper, and R. Redding, 1988. Kom el-Hisn: Excavations of an Old Kingdom Settlement in the Egyptian Delta. *Journal of the American Research Center in Egypt* 25:5-34
- Wenke, R.J., J. Long and **P. Buck**, 1988. Epipaleolithic and Neolithic Subsistence and Settlement in Egypt's Fayyum Oasis. *Journal of Field Archaeology* 15:29-51
- Robert J. Wenke, **P. Buck**, J. Hanley, M. Lane, J. Long, and R. Redding, 1983. The Fayyum Archaeological Project: Preliminary Report of the 1981 Season. *American Research Center in Egypt Newsletter* 122:25-34.

SCHOLARSHIP—PUBLISHED ABSRACTS (these are from professional scientific conferences I have participated in)

- Buck, Paul**, J. Edmonds, R. Jasoni, and L. Rosales-Lagarde, 2021. “GP-IMPACTS: Nevada’s GeoGateway Program-A Collaborative effort to recruit, retain, and graduate more students into NSC’s ERS program”. Paper presented at the annual meeting of the American Geophysical Union Dec. 11-17 2021—This was in a special symposium on diversity and the geosciences and was a report on my NSF Geopaths award.
- Buck, Paul** (Nevada State College/Desert Research Institute) and Donald Sabol (Desert Research Institute) Sub-Pixel Detection of Obsidian and Pottery by NASA Satellite and Aircraft Data, 2017. . Abstracts of the 82 annual meeting of the Society for American Archaeology, Vancouver, Canada March 29-April 2, 2017. pp.68-69
- Buck, Paul** and Donald Edwin Sabol, 2017, Sub-Pixel Detection of Obsidian and Pottery by NASA Satellite and Aircraft Data, Abstracts of the Geological Society of America annual meeting, 22-25 October, Seattle, WA Vol. 49, No. 6
- Jennings, A, **Buck, P.**, Rosales-LaGarde, L, and Sabol, D, 2017. A remote sensing approach to understanding the health of Clark County Wetlands park, NV, USA. Abstracts of the Geological Society of America annual meeting, 22-25 October, Seattle, WA Geological Society of America Abstracts with Programs. Vol. 49, No. 6
- Buck, Paul E.** and D. Sabol, 2015. Sub-Pixel Detection of Obsidian at Glass Mountain Site Using NASA Satellite and Aircraft Data. Abstracts of the SAA 80th annual meeting, San Francisco, CA April 15-19, 2015 (p. 125)
- Sabol, Donald Jr., and **Paul E. Buck**, 2014, Determining Optimal Conditions for Direct Detection of Sub-Pixel Archaeological Materials Using Airborne and Satellite Spectral Data, in Abstracts of The 4th International Symposium on Recent Advances in Quantitative Remote Sensing: RAQRS'IV, 22-26th September 2014, Valencia, Spain (p.37)
- Buck, Paul**, 2014. Evaluating the Effectiveness of Nevada’s Climate Change High School Science Fair Network. Abstracts of the Astronomical Society of the Pacific 2014 Annual Meeting, Burlingame CA Aug. 3-6, 2014.
- Buck, Paul** and Donald Sabol, 2014. Sub Pixel Detection of Archaeological Materials Using NASA satellite and Aircraft Data. Abstracts of the SAA 79th annual meeting, Austin, TX March 23-26, 2014 (p. 108)
- Buck, Paul** (Nevada State College/Desert Research Institute) and Donald Sabol (Desert Research Institute), 2013, Remote Sensing for Detection of Prehistoric Landscape Use in NW Arizona, USA. P. 82, Abstracts of the Society for American archaeology 78th annual meeting, Honolulu, Hawaii
- Buck, Paul** and D. Sabol, 2013, Sub-pixel detection of Archaeological materials using NASA satellite and Aircraft Data, Geological Society of America annual meeting, Denver, CO.
- Buck, Paul**, L.Rudd, A. Bonde, and J. McAlister 2013. Evaluating a 5 year climate change research teacher professional development program in Southern Nevada. Geological Society of America annual meeting, Denver, CO. Published abstract.
- Buck, Paul**, L.Rudd, J. McAlister, and A. Bonde 2013. Evaluating a 5 year climate change research teacher professional development program. American Geophysical Union annual fall meeting San Francisco, CA Dec. 9-12 2013. Published abstract.
- Buck, Paul**, Lawrence Rudd, Aubrey Bonde, Juan McAlister, 2013. The EPSCoR Climate Change Secondary Science Teacher Professional Development Program in S. Nevada, Ensuring STEM Literacy 125th Annual Meeting Education & Public Outreach • Cosmos in the Classroom San Jose State University • San Jose, California July 20–24, 2013

- Rudd, Lawrence, A. Bonde, and **P. Buck**, 2012. Preparing Secondary School Teachers to Teach about Climate Change: The Professional Development Model Used in Southern Nevada as Part of Nevada NSF EPSCoR. Paper presented at The Fourth International Conference on Climate Change: Impacts and Responses 2012/07/12 and 2012/07/13.
- Rudd, Lawrence P., Rowland, Stephen M., and **Buck, Paul E.**, 2011. Invigorating High School and Middle School earth Science through Inquiry and student research: a field oriented Geoscience workshop for secondary science teachers in Southern Nevada. GSA Annual Meeting in Minneapolis (9–12 October 2011), Paper No. 216-4
- Buck, Paul E.**, 2011. Detecting Prehistoric Landscape Use through Remote Sensing in NW Arizona, USA. 2011 GSA Annual Meeting in Minneapolis (9–12 October 2011). Paper No. 111-14
- Buck Paul E.** and Don Sabol, 2011, Optimal Prehistoric Maize Field Location in Mt Trumbull AZ Area. Abstracts of the 76th Annual Meeting Society for American Archaeology march 30-April 3, 2011 Sacramento, CA.
- Buck, Paul E.** and Don Sabol, 2010, Prehistoric Land Use in the Mt Trumbull region, NW Arizona, USA. Abstracts of the Geological Society of America Annual meeting Oct 31-Nov. 3, 2010, Colorado convention center, Denver CO.
- Buck Paul E.** and Don Sabol, 2010, Modeling Optimal maize Field Location on the Uinkaret Plateau, NW Arizona. Abstracts of the 32nd Great Basin Anthropological Conference, October 20-23, Layton Utah.
- Buck, Paul E.**, 2010. Are PII Site Densities near Mt. Trumbull Higher Than other Areas of the Arizona Strip? Abstracts of the 75th Annual Meeting Society for American Archaeology April 14-18, 2010 St. Louis Missouri.
- Buck, Paul E.** and S. Sakai, 2008, The Ancestral Puebloan Occupation of the Mt Trumbull area, Uinkaret Plateau, Grand Canyon-Parashant National Monument, Abstracts of the 73rd annual meeting of the Society for American Archaeology, Vancouver, Canada.
- Buck, Paul E.**, and S. Sakai, 2007, “The Ancestral Puebloan Occupation of the Mt Trumbull area, Uinkaret Plateau, Grand Canyon-Parashant National Monument”, Abstracts of the 2nd Annual Three Corners Conference, Las Vegas, NV October 2007
- Buck, Paul E.**, and S. Sakai, 2007, “Land Use and Settlement in Mt Trumbull, Northwest Arizona”, Abstracts of the 72nd Annual Meeting of the Society for American Archaeology, Austin, Texas, April 25–29, 2007
- Sakai, Sachko, and **Paul Buck** 2006 Ceramic Exchange Between the Great Basin and Uinkaret Plateau: Evidence from Mt. Trumbull, Northwestern Arizona. Great Basin Anthropological Conference, Las Vegas, Nevada.
- Buck, Paul E.** and S. Sakai, 2005, The Mt Trumbull Prehistory Project, Society for American Archaeology annual meeting, Salt Lake City, 2005, program with abstracts.
- Teran, John, S. Rowland, and **P. Buck**, 2005, The Tule Springs Geoscience Education Project, Geological Society of America Abstracts with Programs, V. 37(7): pp. 216. Salt Lake City Annual Meeting.
- Buck, Paul E.**, D. Sabol, G. Yamada, and A. Gillespie 2000. Thermal Detectability of Ceramic and Obsidian artifacts. Poster presented at the Society for American Archaeology annual meeting, Philadelphia, PA April 5-9 2000.
- Buck, Paul E.**, F. Nials and P. Wigand 1998. Prehistory, geochronology and vegetation change in Indian Springs Valley, southern Nevada. Poster presented at the Society for American Archaeology annual meeting, Seattle, Washington, March 25-29, 1998.
- Buck, Paul E.**, 1997. Results of Ground Penetrating Survey in Pintwater Cave, a Dry Cave in Southern Nevada. Paper presented at Society for American Archaeology Annual meeting Nashville, TN.
- Buck, Paul E.**, B. Hockett, P. Wigand, and F. Nials, 1996. Prehistory and Paleoenvironment at Pintwater Cave, Nevada: Results of Field Work during the 1996 Season (with). Paper presented at the Great Basin Anthropological Conference, Kings Beach, CA October 1996.

- Buck, Paul E.**, S. Eskenazi and L. Perry 1996. Excavations at the Watchman Campground Site (42Ws126) in Zion National Park, Utah. Poster presented at the Society for American Archaeology Annual meeting, new Orleans LA April 18-22.
- Buck, Paul E.** 1995. In-field vs. Laboratory Analyses of Lithic Scatters in the Yucca Mountain Area. Paper presented at Society for American Archaeology annual meeting, Minneapolis, May 1995.
- Buck, Paul E.**, and G. Haynes 1995. Technological Diversity at Prehistoric Sites near Yucca Mountain, Nye County, Nevada. Paper presented at Society for American Archaeology annual meeting, Minneapolis, May 1995 (with Gregory Haynes).
- Buck Paul E.**, 1994 Pintwater Cave: The 1993 Season. Paper presented at Great Basin Anthropological Conference, Elko Nevada.

SCHOLARSHIP—SIGNIFICANT TECHNICAL REPORTS (not peer reviewed)

- Buck, P.** and P. K. House, 2000. Geoarchaeological Evaluation of Terrace Archaeology in Parunuweap Canyon. Project Number ZION I 201.000. Final report to Zion National Park, 22 pp., 15 figs., 4 tables, 1 plate.
- Sabol, Don, **P. Buck**, and A. Gillespie, 2000. Direct Detection of Archaeological sites Using Remote Sensing. Final Project report SERDP project number CS-1142, ARO Grant Number DAAD-19-99-1-0261.
- Paul E. Buck**, W. Hartwell and G. Haynes, 1998. *Archaeological Investigations at Two Early Holocene Sites near Yucca Mountain, Nye County, Nevada*. Topics in Yucca Mountain Archaeology No 2. Prepared by DRI for the U.S. Department of Energy.
- Paul E. Buck**, 1997. *Results of Archaeological Survey and Site Investigations for Year 2, Pintwater Cave Area Archaeological Research Program*. Prepared by DRI for Science Applications International under contract to Nellis Air Force Base.
- Paul E. Buck**, B. Hockett, F. Nials, and P. Wigand, 1997. *Prehistory and Paleoenvironment at Pintwater Cave, Nevada: Results of Fieldwork during the 1996 Season*. Prepared by DRI for Nellis Air Force Base, Nevada.
- Rhode, Dave and **P. Buck**, 1996. *Ethnographic and Ethnohistoric Overview of Nellis Air Force Base and Range Complex, Nevada*. Prepared by DRI for Science Applications International Corporation under contract to Nellis Air Force Base.
- Paul E. Buck**, D. Amick, and W. Hartwell, 1995. *The Midway Valley Site (26NY4759): A Prehistoric Lithic Quarry near Yucca Mountain, Nye County, Nevada*. Topics in Yucca Mountain Archaeology No. 1. Prepared by DRI for U.S. Department of Energy.

SCHOLARSHIP—GRANTS, CONTRACTS, AWARDS, and FELLOWSHIPS

- 2018-present** Principal Investigator, “GP-IMPACTS: Nevada’s GeoGateway Program: A collaboration between Nevada State College, College of Southern Nevada, and the Desert Research Institute”. NSF award# 1801605, M Jones NSF is program manager, \$351,000 over 3 yrs).
- 2016-2017 Principal Investigator, **Nevada NASA Space Grant Consortium Higher Education – Curriculum Development** award “A multi-week learning module on remote sensing for introductory environmental science and geology classes,” NASA Space Grant NNX15AI02H, ~\$41,000 plus non federal match.
- 2013-2016 **Principal Investigator**, “Sub pixel detection of archaeological materials using NASA satellite and aircraft data”, NASA award NNX13A66G, \$372,786 over 3 years starting 8/2013
- 2010-2013 **Principal Investigator**, “Nevada’s Climate Change High School Science Fair Network”, NSF Geoscience award #GEO1035049, ~\$148,000/ 2 yrs.

- 2008-2013 **Project Director**, EPSCoR Ring True IV, Nevada Climate Change Infrastructure Proposal, K-12 component (~\$400,000 over 5 yrs to NSC and \$220,000 over 5 years to Buck through DRI).
- 2008-2011 **Principal Investigator**, NASA Space Archaeology “Remote Sensing to Aid in the Search of Prehistoric Anasazi Agricultural Fields and Seasonal Dwellings in NW Arizona”. Grant Number: NNX08AM08G, \$291,000 over 3 yrs.
- 2008-2011 **Co-Investigator** (with L. Rudd), NeCoTIP award “Invigorating High School and Middle School Earth Science Through Inquiry and Student Research, \$108,000 over 2 yrs.
- 2007-2008 **Co-Investigator** (with L. Rudd) NeCoTIP award “Invigorating High School and Middle School Earth Science Through Inquiry and Student Research, \$78,000 over 2 yrs.
- 2005-2008 **Project Director**, MESA/PASS Program, NSF EPSCoR award # 0447416, RING-TRUE III, 3 months/yr., \$200,000/yr. through July 2008
- 2004-2007 **Principal Investigator**, “Curriculum Development for the Oliver Ranch Outdoor Science School”, US Dept. of Education, \$100,000, through June 30, 2007
- 2003-2007 **Principal Investigator** "Late Pleistocene Extinction and Paleoenvironments in Southern Nevada: Combining Effective Geoscience Curricula with Authentic Research for High School Students and Teachers." NSF award #0331249 \$149,000 Oct. '03-Sept. '07; plus a \$40,000 match from Nevada Power Co.
- 2005-2007 **Principal Investigator**, “Ecological Health Assessment in Southern Nevada”, funded by the Southern Nevada Public Lands Management Act through the Great Basin Cooperative Ecosystem Studies Unit, \$253,000, 2/1/05-4/30/07).
- 2002-2005 **Project Director**, “Increasing Diversity in Science in Nevada” (EPSCoR RING TRUE II; 4 mos/yr., \$1,400,000, 8/1/02-7/31/05).
- 2000-2005 **Project Director**, IRCEB Teacher Enhancement program (NSF; funded for 5 yrs for \$3,000,000 to PI J. Arnone, teacher portion about \$10,000/yr; 1 mo.yr.)
- 2001-2002 Sabbatical Leave Award for 2001-2002 based on proposal titled “Science Education at DRI.”
- 1998-2002 **Principal Investigator**, “Nevada Science Teacher Enhancement Project”, funded by the Teacher Enhancement Program of the National Science Foundation (3-yr budget ~\$950,000; 4 mos./yr., NSF award # ESI-9731285).
- 1999-2001 **Principal Investigator**, “Remote Sensing of Archaeological Materials”, funded by the Strategic Environmental Research and Development Program (SERDP) (FY99 funding of \$113,000; 3 mos. total).
- 1994-2001 **Project Director**, “Yucca Mountain Archaeological Studies Program”, funded by U.S. Department of Energy (with Dave Rhode, FY 99 \$450,000; 10 mos.yr)
- 1999-2001 **Co-Principal Investigator (with Kyle House, NBMG)**, “Archaeology and Geomorphology of Portions of East Fork of the Virgin River, UT”, FY 99 funding \$14,000).
- 1999 **Principal Investigator**, “Archaeological testing of 11 sites near Montgomery Pass, NV” (funded by GTE, Inc. for \$54,000 in 1999).
- 1995-1997 **Principal Investigator**, “Pintwater Cave Prehistory and Paleoenvironment Project”, funded by the U.S. Department of Defense (complete, \$240,000).

TEACHING EXPERIENCE

Nevada State College:

- Anthropology 101, Cultural Anthropology (every semester since 2002; both face to face and on line, 16, 12, 6, and 4 week versions)
- Anthropology 105, Introduction to World Archaeology (on-line, each spring since 2006)
- Anthropology 216, Anthropology through Film, fall semesters
- Anthropology 416, Disease and Illness in Anthropological Films, Fall 2005
- Anthropology 439/ISC300, History and archaeology of Railroad Pass area, Fall 2005

Anthropology 441F, Archaeology of Egypt, Fall 2006, fall 2010
Anthropology 488 Field Methods in Prehistoric Archaeology (summer 1995 [UNLV], 1996 [UNLV], 2003, 2004, 2005, 2006, 2007, and 2008 [all NSC]).
Community Based Learning Capstone CBL 400 (fall 2006, spring 2007, fall 2007, spring 2008)
University of Nevada Las Vegas
Anthropology 448 Field School in Prehistoric Archaeology (jointly with UNLV and DRI summer 1995 and 1996)

University of Washington

Anthropology 100, Survey of Anthropology (University of Washington Spring quarter 1988)
Anthropology 201, Introduction to Physical Anthropology (University of Washington Spring Quarter, 1987)
Archaeology 205, Principles of Archaeology, Winter Quarter, 1987, Archaeology 304, New World Archaeology (University of Washington Winter quarter 1988)
Archaeology 469, the Archaeology of Ancient Egypt (University of Washington, Fall quarter 1988)

High School:

Taught two archaeology field schools for high school teachers and students (2000 and 2001) with the Nevada Science Teacher Enhancement Project (see <http://www.dri.edu/Education/NSTEP/> for descriptions).

WORKSHOPS AND CONFERENCES ATTENDED (other than professional conferences described above)

- 2022 Invited presenter: Teaching For Learning (T4L) Conference, Cedar City Utah March 3-4, 2022. Title: "Interactive discussions between students in on-line classes helps overcome social isolation"
- 2021 Nevada State College Summer OCRC course. Six weeks long sponsored by CTLE at NSC
- 2019 Invited conference in Wurzburg, Germany (2019).**—"International Workshop Geoarchaeology in the Nile Delta" invitation from conference organizers titled 'Geoarchaeology in the Nile Delta' co-organized by the Chairs of Egyptology and Physical Geography of the Julius-Maximilians-Universität Würzburg on November 29-30, 2019.
- 2008 Northwest Commission on Colleges and Universities Workshop on Institutional Self Study February 7-8, 2008, Seattle WA
- 2007 National Science Foundation Math Science Partnerships Program regional Conference, Dec. 11-12, 2007. Washington D.C. By invitation of the Nevada Dept. of Education (travel provided).
- 2007 National Science Foundation Regional Grants Conference, Portland OR Oct. 22-23, 2007 Portland State University.
- 2006 National Association of School Heads/Education Trust State P-16 Summer Institute July 23-25, Big Sky, Montana
- 2003 National Science Foundation Math Science Partnership program Proposal Development Workshop, Portland Oregon Nov. 11-13, 2003. By invitation of the Clark County School District Sponsored Projects Office.
- 1994 Native American Graves Protection and Repatriation Act: Implications and Practical Applications. This was a 3 day workshop sponsored by UNR and the National Park Service. Portland, April 1994
- 1993 Advanced Seminar on preparation of Agreement Documents for Section 106 Compliance. Workshop sponsored by Advisory Council on Historic Preservation and University of Nevada Reno. Denver, November 1993.
- 1993 Introduction to Federal Projects and Historic Preservation Law. Workshop sponsored by the Advisory Council on Historic Preservation and the GSA Interagency Training Center. Seattle, June 1993.

1993 Geographic Information Systems in Archaeology. Workshop sponsored by University of Nevada Reno and Center for Advanced Spatial Technologies. St. Louis, April 1993.

SIGNIFICANT COMMUNITY SERVICE EFFORTS (Public Science education, K-12 Teacher & Student Enhancements)

2003-08 Increasing Diversity in Science in Nevada. A 6 year program on NSHE's NSF EPSCoR award designed to improve opportunities for students underrepresented in STEM fields. Included MESA a middle school high school program that reached more than 800 students; a Freshman Bridge program called PASS reaching more than 100 students over 6 summers, and BRIDGES, an academic year internship program for minority undergraduate students. MESA (Mathematics Engineering Science Achievement) ~140 students in 8 middle/high schools in Nevada participate in an after-school science enrichment program to help them enroll in college in fields such as math, science, engineering, and technology.

2003-2007. "Late Pleistocene Extinction and Paleoenvironments in Southern Nevada: Combining Effective Geoscience Curricula with Authentic Research for High School Students and Teachers." NSF award #0331249 \$149,000 Oct. '03-Sept. '07; plus a \$40,000 match from Nevada Power Co. Earth Sciences honors course and field investigations for high school students at Shadow Ridge High School.

1999-2001 N-STEP (Nevada Science Teacher Enhancing Program) funded by a \$640,000 award from the National Science Foundation Education and Human Resources Directorate. Fifty secondary teachers and 74 high school students from three states participated in authentic field research experiences with research scientists from several campuses of the UCCSN.

Committee Memberships

Nevada State College

- 2019 Committee member NSC grants specialist search
Serving on English faculty tenure track full time search committee
Served on Nursing faculty tenure track full time search committee
- 2015-2018 NSC IRB Administrator (human subjects protections committee)
- 2008 Accreditation Self Study Co-Chair (with Jim LaBuda; by invitation of President Maryanski).
- 2008 IRB committee chair: Provost DiMare requested I form a policy committee for development of NSC's Institutional Review Board; this was done and an IRB number requested for US DHHS.
- 2007 Promotion and Tenure Committee Chair. Served as Chair of the Provost's P&T Committee reviewing two candidates in CY07.
- 2007-2008 Chair of NSC Faculty Senate Bylaws Committee. Drafted revised FS Bylaws and submitted to Senate for approval.
- 2007 Integrated Studies Committee member. Worked with Gregory Robinson (Chair) and others to formulate assessment plans for Integrated Studies degree.
- 2007 Faculty Senate Member at large (NSC)
College Day (Lyle Smith)
- 2005 Environmental Science Program Review Task Group—asked by former VP Lois Becker to re-design environmental sciences program using external and internal focus groups

Desert Research Institute

Faculty Termination Leave Committee
Sabbatical Leave Committee
Faculty Senate Chair (2000-2001 academic year)

NSHE

UCCSN P-16 Council (Interim Chancellor Jim Rogers, Chair)

External

2007-2010 Executive Board member of Gathering Genius, Inc. a non-profit host committee for the 2009 Intel International Science Fair.
2007-2011 Board member of the Advanced Mathematics Science and Technology Academy program at Clark High School.
2004-2006 Center for Accelerating Student Achievement (CASA), Loretta Asay, CCSD Chair
2005-07 Red Rock Desert Learning Center Education Committee (Chair)
2005-07 Southern Nevada Environmental Education Committee (Alan O'Neill, Chair)
2004-2007 Advisory Council on Research and Evaluation, Clark County School District (Robert Parker, CCSD Chair)

EXTERNAL INVITED REVIEW PANELS

- Served as review panel monitor for US Dept. of Education solicitation "Supporting Effective Educator Development (SEED)" program CFDA/Subprogram (84.423A) (monitored 3 external reviewers of 10 proposals averaging about \$7M/each) 2018
- US Dept. of Education "First in the World" program reviewer 2015
- NASA Education Opportunities in NASA STEM (EONS) 2014-MUREP Institutional Research Opportunity – MIRO (February 2015)
- US Dept. of Education i3 (the Investing in Innovation) Program 2013
- NSF Graduate Research Fellowship Program—archaeology and anthropology (Jan. 2013)
- NSF Graduate Research Fellowship Program--anthropology and archaeology (Jan. 2012)
- NSF Opportunities for Enhancing Diversity in the Geosciences review panel January 2011
- NSF Noyce program review panel April 2010
- NASA Space archaeology April 2010
- Strategic Environmental Research and Development Program panel review Spring 2008
- NSF Archaeology Program ad hoc reviewer Fall 2007
- NSF Math & Science Partnership Program, Sol. 02-061 JUNE 2002
- NSF Teacher Enhancement, Sol. 01-60 NOV. 2001
- NSF GK-12 Fellows, Sol. 01-114 OCT. 2001
- NSF Geosciences Diversity panel, MAY 2001

PROFESSIONAL AFFILIATIONS

Society for American Archaeology
American Geophysical Institute