

Daniel R. Hirmas

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EDUCATION

- Ph.D. in Soil and Water Sciences, University of California - Riverside, June 2008
Dissertation: Surface Processes, Pedology, and Soil-Landscape Modeling of the Southern Fry Mountain Bolson, Mojave Desert, California
- M.S. in Soil Science, Texas Tech University, 2003
Thesis: Degradation of Pedogenic Calcretes in West Texas
- B.A. in Biology, Texas A&M University, 1999

ACADEMIC APPOINTMENTS

- Courtesy Assistant Professor, Environmental Studies Program, University of Kansas, Lawrence, KS, 2009-Present.
- Assistant Professor, Department of Geography, University of Kansas, Lawrence, KS, 2008-Present.

PUBLICATIONS

Articles (*italics indicate students*)

- *Subroy, V.*, D. Giménez, **D.R. Hirmas**, and P. Takhistov. 2011. On determining soil aggregate bulk density by displacement in two immiscible liquids. *Soil Science Society of America Journal*. (In review)
- **Hirmas, D.R.**, *B.F. Platt*, and S.T. Hasiotis. 2011. Determination of calcite and dolomite content in soils and paleosols by continuous coulometric titration. *Soil Science Society of America Journal*. (In review)
- *Eck, D.V.*, and **D.R. Hirmas**. 2011. Promising technologies for enhanced quantification and characterization of soil and sediment. *Current Research in the Pleistocene*. (In review)
- **Hirmas, D.R.**, R.C. Graham, and K.J. Kendrick. 2011. Soil-geomorphic significance of land surface characteristics in an arid mountain range, Mojave Desert, USA. *Catena* 87:408-420.
- **Hirmas, D.R.**, and R.C. Graham. 2011. Pedogenesis and soil-geomorphic relationships in an arid mountain range, Mojave Desert, California. *Soil Science Society of America Journal* 75:192-206.
- *Platt, B.F.*, S.T. Hasiotis, and **D.R. Hirmas**. 2010. Use of low-cost multistriple laser triangulation scanning technology for three-dimensional, quantitative paleoichnological and neoichnological studies. *Journal of Sedimentary Research* 80:590-610.

- **Hirmas, D.R.**, C. Amrhein, and R.C. Graham. 2010. Spatial and process-based modeling of soil inorganic carbon storage in an arid piedmont. *Geoderma* 154:486-494.
- *Rossi, A.M.*, **D.R. Hirmas**, R.C. Graham, and P.D. Sternberg. 2008. Bulk density determination by automated three-dimensional laser scanning. *Soil Science Society of America Journal* 72:1591-1593.
- Graham, R.C., **D.R. Hirmas**, Y.A. Wood, and C. Amrhein. 2008. Large near-surface nitrate pools in soils capped by desert pavement in the Mojave Desert, California. *Geology* 36:259-262.
- **Hirmas, D.R.**, and B.L. Allen. 2007. Degradation of pedogenic calcretes in West Texas. *Soil Science Society of America Journal* 71:1878-1888.
- **Hirmas, D.R.**, and S.A.C. *Furquim*. 2006. A simple modification of the clod method for determining bulk density of very gravelly soils. *Communications in Soil Science and Plant Analysis* 37:899-906.

Book Chapters

- Wysocki, D.A., P.J. Schoeneberger, **D.R. Hirmas**, and H.E. LaGarry. 2011. Geomorphology of Soil Landscapes. In P.M. Huang, Y. Li, and M.E. Sumner (eds.) *Handbook of Soil Science: Properties and Processes*, 2nd ed. CRC Press, Boca Raton, FL. (In press)

Conference Proceedings

- **Hirmas, D.R.**, T. Slocum, *Halfen, A.F.*, *T. White*, P. Atchley, S. Egbert, D. McDermott, W.C. Johnson. 2012. Mapping the effects of seating location and stereoscopic displays on learner outcomes in an introductory physical geography class. In *Abstracts and Programs, Annu. Meet., AAG*, New York, NY. 24-28 Feb. 2012. AAG, Washington, DC.
- *Halfen, A.F.*, T. Slocum, *T. White*, **D.R. Hirmas**, *A. Gilbreath*, D. McDermott, P. Atchley, S. Egbert, W.C. Johnson. 2012. Assessing the impact of stereoscopic displays in introductory physical geography courses. In *Abstracts and Programs, Annu. Meet., AAG*, New York, NY. 24-28 Feb. 2012. AAG, Washington, DC.
- *Eck, D.V.*, and **D.R. Hirmas**. 2011. A novel method for characterizing geometries of interaggregate planar pores in soils with vertic properties. In *Abstracts, Intern. Annu. Meet., ASA-CSSA-SSSA*, San Antonio, TX. 16-19 Oct. 2011. ASA, Madison, WI.
- **Hirmas, D.R.**, B.F. Platt, and S.T. Hasiotis. 2011. Determination of calcite and dolomite content in soils and paleosols by continuous coulometric titration. In *Abstracts, Intern. Annu. Meet., ASA-CSSA-SSSA*, San Antonio, TX. 16-19 Oct. 2011. ASA, Madison, WI.
- Slocum, T., *A. Halfen*, *T. White*, **D. Hirmas**, S. Egbert, D. McDermott, and W. Johnson. 2011. Adoption of stereoscopic displays in geographic education: A persistent problem in geographic visualization. In *Proc. 25th Intern. Cartographic Conf.*, Paris, France. 3-8 July 2011. ICA/CFC, Saint-Mandé, France.
- **Hirmas, D.R.**, and N. Brunsell. 2011. Application of wavelet and fractal techniques to the analysis of soil structure and color. In *Geophysical Research Abstracts*, Vol. 13, EGU General Assembly 2011, Vienna, Austria. 3-8 Apr 2011. EGU, Munich, Germany.
- Hasiotis, S.T., **D.R. Hirmas**, *B.F. Platt*, and *J. Reynolds*. 2011. New frontiers in ichnology using MLT (multistriple laser triangulation) and rapid prototyping technology for three-dimensional

analysis, printing, and sharing of modern and ancient traces with other ichnophiles. *In GSA Abstracts with Programs, Northeastern and North-Central Annu. Joint Meet., GSA, Denver, CO. 20-22 Mar. 2011. GSA, Denver, CO.*

- **Hirmas, D.R.**, and *J.A. Decker*. 2010. Effects of land use on soil organic carbon and hydraulic properties in upland landscapes of eastern Kansas. *In Abstracts, Intern. Annu. Meet., ASA-CSSA-SSSA, Long Beach, CA. 31 Oct.-4 Nov. 2010. ASA, Madison, WI.*
- **Hirmas, D.R.**, N.A. Brunsell, and B.L. Allen. 2010. Soil morphological applications of wavelet and fractal analyses. *In Abstracts, Intern. Annu. Meet., ASA-CSSA-SSSA, Long Beach, CA. 31 Oct.-4 Nov. 2010. ASA, Madison, WI.*
- **Hirmas, D.R.**, and S.T. Hasiotis. 2010. Development of three-dimensional virtual models to enhance conceptualization of soil morphology. *In Abstracts, Intern. Annu. Meet., ASA-CSSA-SSSA, Long Beach, CA. 31 Oct.-4 Nov. 2010. ASA, Madison, WI.*
- **Hirmas, D.R.**, S.T. Hasiotis, and *B.F. Platt*. 2010. Field application of multistriple laser triangulation (MLT) scanning to enhance and quantify descriptions of soil and exogenic trace morphology. *In GSA Abstracts with Programs, Annu. Meet., GSA, Denver, CO. 31 Oct.-3 Nov. 2010. GSA, Denver, CO.*
- *Reynolds, J.*, S.T. Hasiotis, and **D.R. Hirmas**. 2010. Utilizing three-dimensional image scanning and printed models of traces and trace fossils in K-12 classrooms. *In GSA Abstracts with Programs, Annu. Meet., GSA, Denver, CO. 31 Oct.-3 Nov. 2010. GSA, Denver, CO.*
- *Decker, J.A.*, and **D.R. Hirmas**. 2010. Effects of land use on hydraulic properties in upland landscapes of eastern Kansas. *Annu. Meet. Rocky Mount. Div. AAG, Lawrence, KS. 8-9 Oct. 2010.*
- *Platt, B.F.*, S.T. Hasiotis, and **D.R. Hirmas**. 2010. Three dimensional ichnofossil analyses using multistriple laser triangulation (MLT) technology: Quantifying trace-fossil morphology, bioturbation patterns, and ichnopedologic fabrics in sedimentary rocks. *AAPG Annu. Convention & Exhibition., New Orleans, LA. 13 Apr. 2010.*
- **Hirmas, D.R.**, D. Giménez, and X. Li. 2009. Characterization of soil structure and pore architecture from the aggregate to horizon scale. *In Abstracts, Intern. Annu. Meet., ASA-CSSA-SSSA, Pittsburgh, PA. 1-4 Nov. 2009. ASA, Madison, WI.*
- *Zautner, E.J.*, **D.R. Hirmas**, and J. de Koff. 2009. A rapid and accurate field test for the analysis of soil phosphate. *In Abstracts, Intern. Annu. Meet., ASA-CSSA-SSSA, Pittsburgh, PA. 1-4 Nov. 2009. ASA, Madison, WI.*
- *Platt, B.F.*, **D.R. Hirmas**, and S.T. Hasiotis. 2009. Footprints in the landscape: Quantifying bioturbation in soils and paleosols with multistriple laser triangulation (MLT) technology. *In Abstracts, Intern. Annu. Meet., ASA-CSSA-SSSA, Pittsburgh, PA. 1-4 Nov. 2009. ASA, Madison, WI.*
- *Rossi, A.M.*, **D.R. Hirmas**, R.C. Graham, and P.D. Sternberg. 2009. Bulk density determination by automated three-dimensional laser scanning. *In Abstracts, Intern. Annu. Meet., ASA-CSSA-SSSA, Pittsburgh, PA. 1-4 Nov. 2009. ASA, Madison, WI.*
- *Platt, B.F.*, S.T. Hasiotis, and **D.R. Hirmas**. 2009. Use of multistriple laser triangulation (MLT) technology for quantitative, three-dimensional analyses of trace fossils. *In GSA Abstracts with Programs, Vol. 41, Annu. Meet., GSA, Portland, OR. 18-21 Oct. 2009. GSA, Denver, CO.*

- **Hirmas, D.R.**, R.C. Graham, and M. Harlow. 2008. Links between land surface characteristics and near-surface accumulations of dust, soluble salts, nitrate-nitrogen, and carbonate in the southern Fry Mountains, Mojave Desert, USA. *In Abstracts with Programs, Joint. Annu. Meet., GSA/ASA-CSSA-SSSA/GCAGS/HGS, Houston, TX. 5-9 Nov. 2008. GSA, Boulder, CO.*
- *Pietrasiak, N.*, **D.R. Hirmas**, R.C. Graham, and K.N. Bozhilov. 2008. Mineralogy of a par-alithic horizon (well weathered bedrock) in the Mojave Desert. *In Abstracts with Programs, Joint. Annu. Meet., GSA/ASA-CSSA-SSSA/GCAGS/HGS, Houston, TX. 5-9 Nov. 2008. GSA, Boulder, CO.*
- Graham, R.C., **D.R. Hirmas**, Y.A. Wood, and C. Amrhein. 2008. Large near-surface nitrate pools in soils capped by desert pavement in the Mojave Desert, California. *In Abstracts with Programs, Joint. Annu. Meet., GSA/ASA-CSSA-SSSA/GCAGS/HGS, Houston, TX. 5-9 Nov. 2008. GSA, Boulder, CO.*
- **Hirmas, D.R.**, and R.C. Graham. 2007. Spatial distribution of inorganic carbon storage in an arid landscape. *In Abstracts, Intern. Annu. Meet., ASA-CSSA-SSSA, New Orleans, LA. 4-8 Nov. 2007. ASA, Madison, WI.*
- **Hirmas, D.R.**, and R.C. Graham. 2007. Soil-geomorphic classification of an arid mountain range, Mojave Desert, USA. *In Abstracts of the 88th Annu. Meet. AAAS, Pacific Division, Boise, ID. 17-21 June 2007.*
- **Hirmas, D.R.**, and R.C. Graham. 2006. Pedology of an arid mountain range, Mojave Desert, CA. *In Abstracts, Intern. Annu. Meet., ASA-CSSA-SSSA, Indianapolis, IN. 12-16 Nov. 2006. ASA, Madison, WI.*
- **Hirmas, D.R.**, and R.C. Graham. 2006. Soil surface properties of Mojave Desert landforms. *In Abstracts, 18th World Congress of Soil Science. IUSS, Philadelphia, PA. 9-15 July 2006.*
- **Hirmas, D.R.** 2005. Spatial and process-based modeling of inorganic carbon storage in the Mojave Desert. *Kearney Foundation Conf., Davis, CA. 24 May 2005.*
- **Hirmas, D.R.**, and R.C. Graham. 2004. Relationships between soil surface characteristics and geomorphology in the Mojave Desert. *3rd Annu. Mojave Desert Science Symposium, Redlands, CA. 16-18 Nov. 2004.*
- **Hirmas, D.R.**, and R.C. Graham. 2004. Relationships between soil surface characteristics and geomorphology in the Mojave Desert. *In Abstracts, Intern. Annu. Meet., ASA-CSSA-SSSA, Seattle, WA. 1-4 Nov. 2004. ASA, Madison, WI.*
- **Hirmas, D.R.**, and B.L. Allen. 2003. Degradation of pedogenic calcretes in West Texas. *In Abstracts, Intern. Annu. Meet., ASA-CSSA-SSSA, Denver, CO. 2-6 Nov. 2003. ASA, Madison, WI.*

Manuscripts in Preparation

- **Hirmas, D.R.**, D. Giménez, X. Li, V. Subroy, and B.F. Platt. Characterization of soil structure and pore architecture from the aggregate to horizon scale. *Geoderma.*

Highlighted Contributions

- Science. 2011. Arid mountains affect soil-geomorphic evolution and biogeochemical cycling in desert soilscapes. *CSA News 56(3):14.*
- Research and Industry. 2009. Soil bulk density determination by automated three-dimensional laser scanning. *CSA News 54:4.*

- Research Highlights. 2008. Nitrate under the pavement. *Nature Geoscience* 1:210.
- Spotlight. 2008. Large source of nitrate, a nutrient and potential water contaminant, found in near-surface desert soils. UC Riverside Newsroom. 28 Feb. 2008. (<http://www.newsroom.ucr.edu/cgi-bin/display.cgi?id=1782>)

PRESENTATIONS

Invited

- Soil geomorphology and biogeochemistry of an arid mountain bolson, Mojave Desert, USA. Kansas Biological Survey, University of Kansas Ecosystems Research Group. 24 Sep. 2010.
- Land-use effects on soil architecture and near-surface hydrology in eastern Kansas. Iowa State University, Department of Geological and Atmospheric Sciences, Seminar. 10 Sep. 2010.
- Soil and paleosol geochemistry. University of Kansas, Department of Geology, Paleopedology guest lecture. 28 Apr. 2010.
- Soil Architecture of the Rockefeller Experimental Tract: Initial Findings and Implications. Kansas Biological Survey, KU Field Station and Ecological Reserves, Seminar. 13 Nov. 2009.
- Soil Geomorphology of an Arid Mountain Bolson, Mojave Desert, USA. Kansas State University, Department of Geography, Seminar. 11 Sep. 2009.
- Geomorphology, pedology, and soil-landscape modeling of the southern Fry Mountain bolson, Mojave Desert, USA. Rutgers University, Department of Environmental Sciences. 30 Jun. 2009.
- Soil-biota relationships. University of Kansas, Department of Geography, Introduction to Soil Geography guest lecture. 26 Feb. 2008.
- Surface processes, pedology, and soil-lands-cape modeling, Mojave Desert, California. University of Kansas, Department of Geography, Colloquium Series. 25 Feb. 2008.
- Soils. Heritage K8 Charter School, Escondido, CA, 6th-grade class period guest lecture. 17 Jan. 2008.
- Spatial distribution of inorganic carbon storage in an arid landscape. UCR Department of Environmental Sciences, Soil and Water Sciences Program, Riverside, CA, Seminar. 3 Dec. 2007.
- What is soil science? Rancho Buena Vista High School, Vista, CA, Four class periods of 10th-grade Integrated Science guest lectures. 22 Feb. 2007.

Volunteered

- Mapping the effects of seating location and stereoscopic displays on learner outcomes in an introductory physical geography class. AAG Annu. Meet. 24-28 Feb. 2012.
- Determination of calcite and dolomite content in soils and paleosols by continuous coulometric titration. ASA-CSSA-SSSA Intern. Annu. Meet. 16-19 Oct. 2011.
- Application of wavelet and fractal techniques to the analysis of soil structure and color. EGU General Assembly 2011 3-8 Apr. 2011.
- Effects of land use on soil organic carbon and hydraulic properties in upland landscapes of eastern Kansas. ASA-CSSA-SSSA Intern. Annu. Meet. 31 Oct.-4 Nov. 2010.

- Soil morphological applications of wavelet and fractal analyses. ASA-CSSA-SSSA Intern. Annu. Meet. 31 Oct.-4 Nov. 2010.
- Development of three-dimensional virtual models to enhance conceptualization of soil morphology. ASA-CSSA-SSSA Intern. Annu. Meet. 31 Oct.-4 Nov. 2010.
- Characterization of soil structure and pore architecture from the aggregate to horizon scale. ASA-CSSA-SSSA Intern. Annu. Meet. 1-4 Nov. 2009.
- Links between land surface characteristics and near-surface accumulations of dust, soluble salts, nitrate-nitrogen, and carbonate in the southern Fry Mountains, Mojave Desert, USA. GSA/ASA-CSSA-SSSA/GCAGS/HGS Joint. Annu. Meet. 5-9 Nov. 2008.
- Large near-surface nitrate pools in soils capped by desert pavement in the Mojave Desert, California. GSA/ASA-CSSA-SSSA/GCAGS/HGS Joint. Annu. Meet. 5-9 Nov. 2008.
- Spatial distribution of inorganic carbon storage in an arid landscape. ASA-CSSA-SSSA Intern. Annu. Meet. 4-8 Nov. 2007.
- Soil-geomorphic classification of an arid mountain range, Mojave Desert, USA. AAAS Pacific Division Annu. Meet. 17-21 June 2007.
- Pedology of an arid mountain range, Mojave Desert, CA. ASA-CSSA-SSSA Intern. Annu. Meet. 12-16 Nov. 2006.
- Soil surface properties of Mojave Desert landforms. IUSS 18th World Congress of Soil Science. 9-15 July 2006.
- Spatial and process-based modeling of inorganic carbon storage in the Mojave Desert. Kearney Foundation Conf. 24 May 2005.
- Relationships between soil surface characteristics and geomorphology in the Mojave Desert. 3rd Annu. Mojave Desert Science Symposium. 16-18 Nov. 2004.
- Relationships between soil surface characteristics and geomorphology in the Mojave Desert. ASA-CSSA-SSSA Intern. Annu. Meet. 1-4 Nov. 2004.
- Degradation of pedogenic calcretes in West Texas. ASA-CSSA-SSSA Intern. Annu. Meet. 2-6 Nov. 2003.

GRANTS, AWARDS AND HONORS

- KU College of Liberal Arts and Sciences Faculty Travel Award, 2011 (\$700)
- NSF 05-550, Facilities to Enhance Research and Teaching at the University of Kansas Field Station, Co-Investigator, 2011-2014 (\$329,890)
- US EPA Office of Water: National Wetland Condition Assessment, Field Sampling Services for National Aquatic Resource Surveys, Co-Investigator on Central Plains Center for BioAssessment (CPCB) subcontract, 2011 (\$73,280 CPCB subcontract portion)
- KU Center for Teaching Excellence, Faculty Seminar Participant, 2011 (\$1,000)
- KU General Research Fellowship, 2011-2012 (\$3,656)
- KU Center for Teaching Excellence, BPI Faculty Facilitator, 2011 (\$1,000)
- KU New Faculty General Research Program Grant, 2010-2011 (\$7,950)

- KU College of Liberal Arts and Sciences Faculty Travel Award, 2011 (\$700)
- KU Center for Teaching Excellence, Best Practices Institute, 2010 (\$700)
- KU Field Station Small Grants Program, 2010 (\$250)
- KU College of Liberal Arts and Sciences Faculty Travel Award, 2009 (\$700)
- KU College of Liberal Arts and Sciences Faculty Travel Award, 2008 (\$900)
- Stolzy-Letey Environmental Science Travel Scholarship, 2007 (\$750)
- AAAS Pacific Division J. Thomas Dutro, Jr. Geosciences Award, 2007 (\$275)
- AAAS Pacific Division Student Travel Award, 2007 (\$150)
- Western Soil Science Society/AAAS Pacific Division 1st Place Poster Award, 2007 (\$150)
- Frank T. Bingham Memorial Fellowship, 2006-2007 (\$2,000)
- Albert Marsh Environmental Sciences Scholarship, 2006-2007 (\$400)
- UCR Graduate Dean's Dissertation Research Grant, 2006 (\$1,000)
- UCR Academic Senate Omnibus Field Research Travel Grant, 2006 (\$500)
- UCR Graduate Student Association Conference Travel Grants, 2004-2007 (\$2180 in total)
- Kearney Foundation of Soil Science Graduate Fellowship, 2004-2006 (\$64,965)
- UCR Dean's Fellowship, 2003-2004 (\$33,527)
- Sigma Gamma Epsilon Geological Honor Society: Alpha Beta Chapter, Texas Tech University, 2002-2003

COURSES TAUGHT

- GEOG 104 Principles of Physical Geography, KU, Spring 2009, Fall 2009, 11.
- GEOG 331 Regional Geomorphology of the United States, KU, Fall 2008.
- GEOG 335 Introduction to Soil Geography, KU, Fall 2009-11.
- GEOG 535 Soil Geography, KU, Fall 2008-11.
- GEOG 538 Environmental Soil Physics and Chemistry, KU, Spring 2010
- GEOG 735 Soil Geomorphology, KU, Spring 2010.
- GEOG 935 Soil Geography Seminar, KU, Spring 2009.

GRADUATE COMMITTEES

Committees Chaired

- Kim Drager (M.A., Geography, in progress)
- Dennis Eck (M.A., Geography, in progress)
- Eric Zautner (M.A., Geography, in progress)

Committee Member

- Mark Bowen (Ph.D., Geography, completed March 2011)
- Tyler Buck (M.S., Atmospheric Science, completed June 2010)
- Ryan Callihan (M.A., Geography, in progress)
- Erin Dempsey (Ph.D., Anthropology, in progress, ABD)
- Daniel Doolittle (Ph.D., Geology, in progress)
- Rubina Firdous (Ph.D., Geology, in progress, ABD)
- Patrick Green (M.A., Anthropology, in progress)
- Andrew Gottsfield (Ph.D., Anthropology, in progress)
- Alan Halfen (Ph.D., Geography, in progress, ABD)
- Daniel Keating (M.A., Anthropology, in progress)
- Benjamin Keil (Ph.D., Philosophy, in progress)
- Scott Klopfenstein (M.A., Geography, in progress)
- Aaron Koop (M.A., Geography, in progress)
- Anthony Layzell (Ph.D., Geography, in progress)
- Pei-Ling Lin (Ph.D., Geography, in progress, ABD)
- Laura Murphy (Ph.D., Anthropology, in progress)
- Brian Platt (Ph.D., Geology, in progress, ABD)
- Karen Willey (Ph.D., Geography, completed July 2009)
- Garrett Welch (M.A., Anthropology, in progress)
- Kristopher West (M.A., Anthropology, in progress)
- Terri Woodburn (Ph.D., Geography, in progress, ABD)
- Ashley Zung (Ph.D., Geography, in progress, ABD)

PROFESSIONAL SERVICE

- Reviewer, Soil Science Society of America Journal, 2011.
- Reviewer, SEPM Special Publication, 2011.
- Reviewer, The Professional Geographer, 2011.
- Member, Curriculum Committee, KU Department of Geography, 2011 - 2012.
- Reviewer, European Journal of Soil Science, 2011.
- Reviewer, Plant and Soil, 2011.
- Editorial Board Member, Open Journal of Soil Science (OJSS), 2011-2012.
- Member, Soil Micromorphology Committee, Soil Science Society of America, 2011 - 2013. This

committee works to facilitate the planning and organization of soil micromorphology workshops and practicum at the annual meetings.

- Member, Executive Committee, KU Field Station, Kansas Biological Survey, 2010 - 2011.
- Member, Honors Committee, KU Department of Geography, 2010 - 2011.
- Presenter and Participant: Two iQuest camp panels to engage learning among underrepresented and economically disadvantaged 7th and 8th grade students (primarily Hispanic, African American, Native American, and women) for the NSF ITEST program, 15 & 22 July 2010.
- Member, Outreach Committee, KU Department of Geography, 2009 - 2010.
- Session Organizer, Soil Characterization, Modeling, and Prediction using Novel Instrumentation and Techniques, Div. S05, ASA-CSSA-SSSA, Pittsburgh, PA. 1-4 Nov. 2009.
- Presenter and Participant, iQuest camp panel to engage learning among underrepresented and economically disadvantaged middle-school students (primarily Hispanic and Native American) for the NSF ITEST program 16 July 2009.
- Mentor, Hosted and trained a high-school Earth science teacher in standard soil analyses, 18-24 Jun. 2009.
- Co-Administrator, Algorithms for Quantitative Pedology (AQP) R-Forge Project. (<http://r-forge.r-project.org/projects/aqp/>)
- Member, Curriculum Committee, KU Department of Geography, 2008 - 2009. This committee worked to make several important changes to the curriculum including adding four new courses (GEOG 335, 352, 531, 538), changing one existing course (GEOG 735), updating required courses for the B.S. in Geography - Physical Geography Option, and submitting a proposal for a new M.S. degree in Geography.
- Reviewer, Soil Science, 2008 - 2011.
- Presiding Officer, Mineralogical Controls on Soil Physical, Chemical, and Biological Processes, Div. S09, ASA-CSSA-SSSA, New Orleans, LA, 4-8 Nov. 2007.
- Presiding Officer, Pedologic Progress, Philosophy, and Perspectives, Div. S05, ASA-CSSA-SSSA, Indianapolis, IN, 12-16 Nov. 2006.

PROFESSIONAL ADVANCEMENT

- Geological Society of America Annual Meeting, 2008
- Western Society of Soil Science/AAAS Pacific Division, 2007
- Desert Project Tour, 2007
- World Congress of Soil Science, 2006
- Friends of the Pleistocene, Pacific Cell, 2005
- International Salinity Forum, 2005
- Learning ArcGIS 9, Online Course, UCR Extension/ESRI, 2005
- Mojave Desert Science Symposium, 2004

- Soil Science Society of America Annual Meeting, 2002-2011
- International Conference on Aeolian Research (ICAR-5), 2002
- Nematode Identification Short Course, Clemson University, 2000

PROFESSIONAL AFFILIATIONS

- European Geosciences Union (EGU), 2011–Present
- Association of American Geographers (AAG), 2009–Present
- American Geophysical Union (AGU), 2002–Present
- Soil Science Society of America (SSSA), 2001–Present
- Association of Analytical Chemists (AOAC) International, 1999-2003