CURRICULUM VITAE

University of Idaho

NAME: Anne Liu Kern

DATE: January 20, 2019

RANK OR TITLE: Associate Professor

DEPARTMENT: Curriculum and Instruction

OFFICE LOCATION AND CAMPUS ZIP:
Office: 145-C
1031 N. Academic Way
Coeur d'Alene, ID 83814

OFFICE PHONE: 208.292.1402

FAX: 208.667.5275

EMAIL: akern@uidaho.edu

WEB: http://www.uidaho.edu/ed/ci/anneliukern

DATE OF FIRST EMPLOYMENT AT UI: September 2007

DATE OF TENURE: June 2013

DATE OF PRESENT RANK OR TITLE: June 2013

EDUCATION BEYOND HIGH SCHOOL:

Degrees:

Ph.D., University of Minnesota, Minneapolis, MN, November 2007, Curriculum and Instruction—Science Education
M.S., Portland State University, Portland, OR, August 1995, Curriculum and Instruction—Science
B.A., University of California at Santa Cruz, CA, June 1982, Chemistry

Certificates and Licenses:

Secondary Certificate: Chemistry (9-12), Basic Mathematics (6-12), Oregon Teacher Licensure, 1992-2010.

EXPERIENCE:

Teaching, Extension and Research Appointments:

Associate Professor, Department of Curriculum and Instruction, University of Idaho, Coeur d'Alene, Idaho, 2013-Present.
Assistant Professor, Department of Curriculum and Instruction, University of Idaho, Coeur d'Alene, Idaho, 2007-2013.
Affiliate Faculty, Environmental Science Program, College of Graduate Studies, Moscow, Idaho, 2010 – Present.
Instructor, Department of Curriculum and Instruction, University of Minnesota, Minneapolis, MN, 2006-2007.
Graduate Research Assistant/Student Teacher Supervisor, Department of Curriculum and Instruction, University of Minnesota, Minneapolis, MN, 2005-2007.
Graduate Research Assistant/Intern Supervisor, School of Teacher Education, San Diego State University, 2003-2005.

Non-Academic Employment including Armed Forces:

Chemistry Teacher/Department Head, Newberg High School, Newberg, Oregon, 1993-2003.
Water Quality Laboratory Supervisor, California Water Service Company, San Jose, California, 1986-1992.
Research Chemist, SRI International, Menlo Park, California, 1982-1986.

TEACHING ACCOMPLISHMENTS:

Areas of Specialization:

My research interests are exploring students' understandings and dispositions (e.g. attitudes, self-efficacy,

and motivation) for science, and how teachers impact their understandings and dispositions.

Courses Taught: (title, course number, date(s))

ADOL/PTTE/EDCI 570: Introduction to Research Methods in Education, F09, Sp10
ED 502: Directed Study, FERPA and IRB Review, Sp15
ED 404/504: ST, Introduction to Indigenous Research Theories, F15
ED 504: ST, Epistemic Issues in Educational Research, Sp16
ED 571: Introduction to Quantitative Research, Sp08
ED 574: Introduction to Qualitative Research, Su08, F08, F15
ED 574: Introduction to Qualitative Research (Distance Delivery), F11, F12, F15, F16, F17
ED 589: Designing and Conducting Qualitative Research, Sp11, Sp12, Sp13, Sp14, Sp18 (Hybrid-CdA and Moscow)
ED 590: Critiquing Frameworks, practice, and application in Qualitative Research, F13 (Hybrid-BbLearn and Google Hangout)
ED 611: Doctoral Seminar-I, F09
ED 604: Grant writing to support research, F12
ED 680: Philosophical Foundations of Educational Research, Sp15, Sp16
EDCI 329: Elementary Science Methods, F08, F09 (Moscow), Sp10 (Moscow), F10, F17
EDCI 402: Practicum, Instruction and Reflection in Organic Chemistry, F11
EDCI 408: Integrated Practicum Methods-I, F08, F09 (Moscow), Sp10 (Moscow), F10
EDCI 433: Secondary Science Methods, F14 (Moscow)
EDCI 499: Directed Study, Place-based Aquatic Science, Sp12
EDCI 502: Directed Study, Children's Ideas in Science, F08
EDCI 502: Directed Study, Art and Science, An Intersection, Sp09
EDCI 502: Directed Study, The Nature of Science and Science Inquiry, Su09, Sp10
EDCI 502: Directed Study, Modeling in Physics Pedagogy, Su09
EDCI 502: Directed Study, Science and Socialization of Pit-houses, F09
EDCI 502: Directed Study, Fundamentals of Elementary Science Teaching, Sp10
EDCI 502: Directed Study, Science Themes in Elementary Children's Literature, Su10
EDCI 502: Directed Study, Observation to Theory, Explorations of Darwin's Galapagos, Su10
EDCI 502: Directed Study, AP and Online Pedagogy, Su10
EDCI 502: Directed Study, Math, Formative Assessment with Games, F10
EDCI 502: Directed Study, Exploration of Professional Development Experiences, Sp11
EDCI 502: Directed Study, Biology Curriculum Development and Implementation, Sp11
EDCI 502: Directed Study, Biochemistry for Health Professionals, Sp11
EDCI 502: Directed Study, Environmental Visualization, Su11
EDCI 502: Directed Study, Environmental Images, the Lewis and Clark Project, Su11
EDCI 502: Directed Study, Designing and Conducting Surveys, An Introduction, Su11
EDCI 502: Directed Study, Using Technology Across Campuses, F11
EDCI 502: Directed Study, Survey of American Sign Language (ASL) Education, Sp12
EDCI 502: Directed Study, Proposal preparation of ASL education at North Idaho College, Su12
EDCI 502: Directed Study. Theory of Place-Based STEM Education, Sp12
EDCI 502: Directed Study, STEM Education in Indigenous Communities, Su12, Fa15, Sp16
EDCI 502: Directed Study, Development of Place-based Professional Development, Fa13
EDCI 502: Directed Study, Scholarly writing in Education, Fa15
EDCI 502: Directed Study, Survey of Technology Professional Development, Fa17
EDCI 502: Directed Study, Implementation and Evaluation of Tech Teacher PD, Sp18
EDCI 502: Directed Study, Development of Technology Experiences of DOD Students. Sp18
EDCI 503: Idaho Science and Literacy in Elementary Schools, AY08-09, AY09-10
EDCI 504: ST, Native Nation Building, JIT, Sp17
EDCI 505: Professional Development, Having Fun with Formative Assessment, Su08
EDCI 505: Professional Development, Ramsey Science Inquiry and Science Notebooking, F10
EDCI 505: Professional Development: Inter-mountain Climate Network, Su11
EDCI 505: Professional Development: Northwest Climate Education Resources, Su12
EDCI 570: Introduction to Research Methods in Education, Sp09, Su09, Sp18

EDCI 598: Intern, Native Nation Building, Sp17
EDCI 697: Practicum: Immersion Experience in STEM Curriculum, Su12
ENVS/EDCI 504: Sustainability: Debunking the Myth, Sp09

Students Advised:

Undergraduate and Certification Students:

Advised to completion of degree or certificate, as of Fa13:

[redacted] secondary education, science, 2011
[redacted] elementary education, 2011
[redacted] cert. elementary education, 2011
[redacted] secondary education, science, 2012
[redacted] elementary education, 2012
[redacted] elementary education, 2012
[redacted] elementary education, 2012
[redacted] elementary education, 2012
[redacted] elementary education, 2012
[redacted] elementary education, 2012
[redacted] elementary education, 2013
[redacted] elementary education, 2015
[redacted] elementary education, 2015
[redacted] elementary education, 2016
[redacted] elementary education, 2016
[redacted] elementary education, 2017

Advised per year:

AY 2008-09: 2
AY 2009-10: 16
AY 2010-11: 34
AY 2011-12: 28
AY 2012-13: 12
AY 2013-14: 10
AY 2014-15: 8
AY 2015-16: 8
AY 2016-17: 6
AY 2017-18: 6
AY 2018-19: 8

Graduate Student, advised to completion:

Masters of Science (MS):

[redacted] NonThesis Project: *The development of an environmental education outreach program for the lower Salmon River corridor*, (committee member, CCS, Hall). May 2010.

[redacted] Thesis: *A case study of volunteer's perspective on the purpose of zoos and aquariums*. May 2011.

[redacted] Thesis: *Miner's inches: A content analysis of corporate disclosures on water in sustainability reports issued by mining companies using the Global Reporting Initiative Sustainability reporting guidelines,* (committee member, WOW, Kraut). May 2012.

Masters of Education (MEd):

[redacted] MEd Project. May 2009
[redacted] MEd Project, September 2009
[redacted] MEd Project, August 2009

[redacted] MEd Project, May 2011
[redacted] MEd Project, May 2011
[redacted] MEd Project, December 2011
[redacted] MEd Project, December 2011
[redacted] MEd Project, December 2011
[redacted] MEd Project, May 2012
[redacted] MEd Project, July 2012
[redacted] Med Project, December 2012
[redacted] MEd Project, August 2013
[redacted] MEd Project, August 2013
[redacted] MEd Project, December 2013
[redacted] MEd Project, May 2014
[redacted] MEd Project, December 2014
[redacted] MEd Webfolio, May 2015
[redacted] MEd Webfolio, May 2015
[redacted] MEd Webfolio, January 2016
[redacted] MEd Webfolio, April 2016
[redacted] MEd, Med Project, May 2017
[redacted] MEd Webfolio, May 2017
[redacted] MEd Webfolio, May 2018
[redacted] MEd Webfolio, May 2018

Doctorate (Ed.D/Ph.D.):

[redacted] (Ph.D.), Dissertation: *A charter school grows, Understanding school choice, A historical perspective*. (Committee member), May 2011.

[redacted] (Ph.D.), Dissertation: *Education for sustainability in career and technical education: A multiple case study of early innovator community college programs*. (Committee member), May 2012.

[redacted] (Ph.D.), Dissertation: *Choosing and using images in environmental science education*. (Committee chair), June 2012

[redacted] (Ph.D.), Dissertation: *Pre-service teachers' conceptions of literal symbols*. (Committee member), August 2012.

[redacted] (Ph.D.), Dissertation: *Transforming the dysfunctional academic department: Dialoguing the disabling past, collaborating positivity for the future.* (Committee member), April 2013.

[redacted] (Ed.D), Dissertation: *A superintendent in cultural transition: An auto ethnography*, (committee member), May 2013.

[redacted] (Ed.D), Dissertation: *The Native American persistence in higher education: A journey through story to identify the family support to Native American graduates.* (Committee member), April 2013.

[redacted] (Ph.D.), Dissertation: *Vandalized: Educational opportunity, inclusion, and academic outsiders at the University of Idaho*. (Committee member), April 2013.

[redacted] (Ph.D.), Dissertation: *Examining teacher mental models for the implementation of a STEM-focused curriculum paradigm in engineering and technology education.* (Committee member), April 2013.

[redacted] (Ph.D.), Dissertation: *A case study of image, imagery, and imagination: The influence of nonverbal learning activities on the written language expression of fourth graders.* (Committee member). July 2013.

[redacted] (Ph.D.), Dissertation: *The ultimate goal: Achieving optimal performance through increased sport enjoyment in collegiate women's soccer*. (Committee member). August 2013.

[redacted] (Ph.D.), Dissertation: *A qualitative study in the development of self-advocacy and independence through symbolic interaction: A focus on wheelchair basketball athletes.* (Committee member). November 2013.

[redacted] (Ed.D.), Dissertation: *Candidate mentor supervisor model: A case study.* (Committee member). November 2013.

[redacted] (Ph.D.), Dissertation: *The attitudes of inland northwest pre-service foreign language teachers: Got privilege?* (Committee chair), May 2014.
[redacted] (Ph.D.), Dissertation: *Investigating the factors that motivate and engage Native American students in math and science on the Duck Valley Indian Reservation following participation in the NASA summer of innovation program.* (Committee member). October 2014.
[redacted] (Ph.D.), Dissertation: *Culturally Sustaining Pedagogy in a Science Classroom: The Phenomenology of the Pit House.* (Committee chair), February 2015.
[redacted] (Ph.D.), Dissertation: *Digital learning readiness: A study on the self-regulation and self-motivation of secondary students enrolled in an online asynchronous economics course.* (Committee member). March 2015.
[redacted] (Ph.D.), Dissertation: *Perceived organizational support for online education and its association with motivation, commitment, and satisfaction: A study of online teaching faculty and organizational leaders.* (Committee member), April 2015.
[redacted] (Ph.D.), Dissertation: *Conceptualizing in-service secondary school science teachers' knowledge case for promoting understanding about the science of global climate change.* (Committee member, UMn). June 2015.
[redacted] (Ph.D.), Dissertation: *Roles of Community and Land in STEM Education for Native American Youth.* (Committee chair), December 2016.
[redacted] (Ed.D.), Dissertation: *Multi-case Study of Professional Ethics in Alternative Education: Exploring Perspectives of Alternative School Administrators.* (Committee member), May 2017.
[redacted] (Ph.D.), Dissertation: *Engineering Practice Informed by Research: Applications for Stormwater Management Design and Education.* (Committee member), April 2018.
[redacted] (Ph.D.), Dissertation: *Influences on Rural Students' College Access and Completion: A Qualitative Case Study.* (Committee member), April 2018.

Graduate Students, serving as Major Professor:

Masters of Education (MEd):
[redacted]

Education Specialist (EdSp):

Doctorate of Philosophy (PhD):
[redacted]

Doctorate in Education (EdD):
[redacted]

Graduate Students, serving on committee:

Masters of Science (MS):

Doctorate of Philosophy (PhD):
[redacted] (Ed, Stoll), [redacted] (Ed, Paul), [redacted] (Ed, Burton), [redacted] (Ed, Gathercoal)

Doctorate of Education (EdD):

Courses Developed:

ADOL/PTTE/EDCI 570, Introduction to Research Methods in Education, Distance Delivery
ED 502, Directed Study, FERPA and IRB Review for Student Privacy
ED 504, Special Topics, Introduction to Indigenous Research Theories
ED 504, Special Topics, Epistemological Issues in Educational Research
ED504, Special Topics, Native Nation Building and Indigenous Governance-January in Tucson
ED 571, Introduction to Quantitative Research

ED 574, Introduction to Qualitative Research, Distance Delivery
ED 589, Designing and Conducting Qualitative Research, Hybrid Delivery
ED 590, Qualitative Research: Critiquing Frameworks, Practice, and Application, Hybrid Delivery
ED 611, Doctoral Seminar-I
ED 604, Grant writing to support research
ED 680, Philosophical Foundations of Educational Research, Hybrid Delivery
EDCI 329, Elementary Science Methods
EDCI 402, Practicum, Instruction and Reflection in Organic Chemistry
EDCI 433, Secondary Science Methods
EDCI 499, Directed Study, Place-based Aquatic Science
EDCI 502, Directed Study, Children's Ideas in Science
EDCI 502, Directed Study, Art and Science, An Intersection
EDCI 502, Directed Study, The Nature of Science and Science Inquiry
EDCI 502, Directed Study, Modeling in Physics Pedagogy
EDCI 502, Directed Study, Science and Socialization of Pit-houses
EDCI 502, Directed Study, Fundamentals of Elementary Science Teaching
EDCI 502, Directed Study, Science Themes in Elementary Children's Literature
EDCI 502, Directed Study, Observation to Theory, Explorations of Darwin's Galapagos
EDCI 502, Directed Study, AP and Online Pedagogy
EDCI 502, Directed Study, Math, Formative Assessment with Games
EDCI 502, Directed Study, Exploration of Professional Development Experiences
EDCI 502, Directed Study, Biology Curriculum Development and Implementation
EDCI 502, Directed Study, Biochemistry for Health Professionals
EDCI 502, Directed Study, Environmental Visualization,
EDCI 502, Directed Study, Environmental Images, the Lewis and Clark Project
EDCI 502, Directed Study, Designing and Conducting Surveys, An Introduction
EDCI 502, Directed Study, Using Technology Across Campuses
EDCI 502, Directed Study, Survey of American Sign Language (ASL) Education
EDCI 502, Directed Study, Proposal preparation of ASL education at North Idaho College
EDCI 502, Directed Study. Theory of Place-Based STEM Education
EDCI 502, Directed Study, STEM Education in indigenous Communities
EDCI 502: Directed Study, Development of Place-based Professional Development
EDCI 502: Directed Study, Data collection in science education research
EDCI 502: Directed Study, Motivating student participation and performance in online class environments
EDCI 502: Directed Study, Scholarly writing in Education
EDCI 502: Directed Study, Survey of Technology Professional Development
EDCI 502: Directed Study, Implementation and Evaluation of Tech Teacher PD
EDCI 502: Directed Study, Development of Technology Experiences of DOD Students
EDCI 504: ST, Native Nation Building, JIT
EDCI 505: Professional Development: Inter-mountain Climate Network
EDCI 570: Introduction to Research Methods in Education, Distance Delivery
ENVS/EDCI 504: Sustainability: Debunking the Myth

Non-credit Classes, Workshops, Seminars, Invited Lectures:

Kern, A. (2017, April). *Invited Presentation: Building community with cultural competence for STEM Education*. College of Liberal Arts, Department of Education Brown Bag, University of New Hampshire,

Honwad, S., Kern, A., Bhattarai, S., Lota-Sisitka, H., & Hoadley, C. (2016, June). Decolonizing research practices and methodologies: Building partnerships for learning sciences research in the 'majority world'. *12th International Conference of the Learning Sciences, Singapore*

Kern, A., Howard. M., Honwad, S., Laumatia, L., Fiedler, F. (2016, May). Back to the Earth, 2015. *Advancing STEM for ALL: NSF 2016 Teaching and Learning Video Showcase. 3rd Annual Video Webinar.*

Kern, A., Howard, M., Cadwell, J., Fiedler, F., & Suhr, N. (2015, May). Back to the Earth, 2014. *NSF 2015 Teaching and Learning Video Showcase. 2nd Annual Video Webinar.*

Kern, A., Navickis-Brasch, A., & Numkena, N. (2014, December). ASTE Workshop Session: The fish weir engineering challenge: A culturally relevant activity. *National Science Teachers Association-2014 Long Beach Area Conference, Long Beach, CA.*

Kern, A. L. & Droser, M. (2013, February). *Invited speakers: What have you learned about "Engaging Under-Represented Groups"?* NASA Innovations in Climate Education (NICE) Community Discussion-Webinar.

Kern, A. L. (2012, June). *Keynote Presentation: Science teaching for cultural relevance.* iSTEM Education, Annual Conference, Treasure Valley, ID.

Kern, A. L. (2012, May). *Director: Building partnerships for Back to the Earth*. Back to the Earth Grant Project Retreat, Worley, ID.

Kern, A. L. (2011, November). *Invited Presentation: Engineering design as science inquiry*. Mathematics and Science Education Colloquium, The University of Montana, Missoula, MT.

Kern, A.L. (2011, July). *Keynote Presentation: Teaching and learning: Engineering (Design) as science inquiry.* iSTEM Education, Annual Conference, Coeur d'Alene, ID.

Hougham, R. J., Kern, A. L., & Kolden, C. A. (2011, August). *Intermountain Climate Education Network, Workshop-II.* McCall, ID.

Kern, A. L., Hougham, R. J., & Kolden. C. A. (2011, June). *Intermountain Climate Education Network, Workshop-I.* McCall, ID.

Kern, A. L. & Pegg, J. (2009, June). *Idaho Science and Literacy in Elementary Schools, Teacher Professional Development Workshop-Cohort II.* Sandpoint, ID.

Pegg, J. & Kern, A. L. (2008, June). *Idaho Science and Literacy in Elementary Schools, Teacher Professional Development Workshop-Cohort I.* Sandpoint, ID.

Kern, A.L. (2001, October). *Exploring science inquiry*. Oregon Science Teacher Association, Regional Meeting, Portland, OR.

Kern, A.L. (2000, October). *Beginning science inquiry*. Oregon Science Teacher Association, Regional Meeting, Hood River, OR.

Kern, A.L. (1995, October). *Chemicals in the media, every day science*. Oregon Science Teacher Association, Regional Meeting, Salem, OR.

SCHOLARSHIP ACCOMPLISHMENTS:

Publications, Exhibitions, Performances, Recitals:

Refereed/Peer Review:

TOTAL PUBLICATIONS (60)

-Refereed Journal Publications: 24 (5 as first author, 11 with graduate students)
-Book Chapters: 10
-Technical Reports: 15
-Proceedings: 11

Journal Publications:

Kern, A. L. & Howard. M. (in press). Response to Wayfinding-Decolonizing science education in pursuit of Native American student success. *Cultural Studies of Science Education.*

Howard, M., & **Kern, A.** (2018). The role of story and myth in Indigenous science education: Bigfoot in an ecological restoration plan. *Cultural Studies of Science Education.*

Kern, A. L., Honwad, S., & McClain, E. (2017). A culturally relevant teacher professional development for teaching climate change to Native American students. *Journal of Education and Training Studies, 5*(10), 1-17.

Goc Karp, G., MacKenzie, S., H., Son, J. S., Brown, H., & **Kern, A. L.** (2016). Facilitating collaborative interdisciplinary research: Exploring process and implications for leisure scholars. *Leisure/Loisir, 40*(2), 201-223.

McGowan, S. L. & **Kern, A. L.** (2016). Pre-service foreign language teachers' awareness of White Privilege. *Journal of Education and Training Studies, 4*(4), 45-57.

Kern, A. L., Howard, M., Navickis-Brasch, A., Fiedler, F., & Cadwell, J. (2015). The fish weir challenge: A culturally relevant engineering design challenge. *Science Scope, 38*(9), 45-52.

Pegg, J. M., Adams, A. E., Risser, H. S., Bottoms, S. I., **Kern, A. L.**, & Wu, K. (2014). Finding FRiENDs: Creating a community of support for early career academics. *Brock Education 24*(1) 47.54.

Muthersbaugh, D. S., **Kern, A. L.,** & Charvoz, R. (2014). Impact through images: Exploring student understanding of environmental sustainability through integrated lessons in the elementary classroom. *The Journal of Research in Childhood Education.*

Hunt, V. L., Muthersbaugh, D. S., & **Kern, A.** (2014). Evaluating images of the environment for educational use: Exploring the use of a rubric derived from visual information theory. *The Online Journal of New Horizons in Education, 4*(1), 49-66.

McGowan, S. L. & Kern, A. L. (2014). Pre-service foreign language teachers' attitudes of privilege and oppression. *Journal of Education and Training Studies, 2*(1), 31-43. doi:10.11114/jets.v2i1.188.

Bottoms, S., Pegg, J., Adams, A., Norman, K., Risser, H., & **Kern, A. L.** (2013). Mentoring from the outside: The role of a peer mentoring community in the development of early career education faculty. *Mentoring and Tutoring Journal.* DOI: 10.1080/13611267.2013.813730.

Nam, Y., Roehrig, G., **Kern, A.** & Reynolds B. (2013). Perceptions and practices of culturally relevant science teaching in American Indian classrooms. *International Journal of Science and Mathematics Education. 11*(1). 143-167. DOI: 10.1007/s10763-012-9372-x.

Muthersbaugh, D. & **Kern, A. L.** (2012). Pre-service teacher use of images in integrating environmental sustainability lessons. *Journal of Teacher Education for Sustainability, 14(1), 67-89.* DOI: 10.2478/v10099-012-0006-8.

Barnicle, S. P., Orr, M. T., & **Kern, A., L.** (2012). Narrowing the I-95 border: Utilizing distance learning technology to bring classrooms together. *International Journal of Instructional Technology & Distance Learning, 9*(1), 85-90.

Kern, A. L., Roehrig, G. H., & Wattam, D. K. (2012). Inside a beginning immigrant science teacher's classroom: An ethnographic study. *Teachers and Teaching, 18* (4), 1-13. DOI: 10.1080/13540602.2012.696047.

Nyachwaya, J., Mohammed, A.R, Roehrig, G.H., Wood, N., **Kern, A. L.**, & Schneider, J. (2011). The Development of an Open-ended Drawing Tool: An Alternative Diagnostic Tool for Assessing Students' Understanding of the Particulate Nature of Matter. *Chemistry Education Research and Practice, 11*, 165-172.

Muthersbaugh, D. R., **Kern, A. L.**, Pegg, J., & Clark, H. (2011). Science Notebooks and "A Big Waste Problem." *The Earth Scientist, 27*(4), 21-26.

Norman, K.W., **Kern, A.**, & Moore, T. (2010). A call for integrating engineering through cooperative learning in the mathematics and science teacher education program. In B. Sriraman & V. Freiman (Eds), *Interdisciplinarity for the 21st Century: Proceedings of the 3rd International Symposium on Mathematics and its Connections to Arts and Sciences, Moncton 2009. Monograph 11 in The Montana Mathematics Enthusiast Monographs in Mathematics Education*, Information Age Publishing, Charlotte, NC.

Norman, K.W., Moore, T., & **Kern, A. L.** (2010). A graduate level in-service teacher education curriculum integrating engineering into science and mathematics contents. *The Montana Mathematics Enthusiast-Special Issue, 7* (2&3), 433-446.

Sato, M. D., **Kern, A. L.**, McDonald, E. J., & Rogers, C. A. (2010). On the inside looking out: Instantiations of the practical. *Teacher Education and Practice, 23* (1), 66-87.

Kern, A. L., Wood, N. B., Roehrig, G. H., & Nyachwaya, J. (2010). A qualitative report of the ways high school chemistry students attempt to represent a chemical reaction at the atomic/molecular level. *Chemistry Education, Research, and Practice, 11*, 165-172. DOI: 10.1039/C005465H.

Bang, E. J., **Kern, A. L.,** Luft, J. A., & Roehrig, G. H. (2007). First-year secondary science teachers: A research brief. *School Science and Mathematics, 107*(6), 52-61.

Roehrig, G. H., Kruse, R. A., & **Kern, A. L.** (2007). Teacher and school characteristics and their influence on curriculum implementation. *Journal of Research in Science Teaching, 44*(7), 883-907. DOI: 10.1022/tea.20180.

Roehrig, G.H., Cox, W.E., & **Kern, A.** (2006). A Comparison of teachers' views of the nature of science and teaching beliefs. *Electronic Journal of Science Education.*

Book Chapters:

Honwad, S., Kern, A., & Bhattarai, S. (in press). Using appropriate methodologies for conducting research in culturally unique communities. Johnson & Barnes-Johnson (Eds). National Science Teachers Association

Honwad, S., Kern, A., Lotz-Sisitka, H., Bhattarai, S. & Hoadley, C. (2016). 'Jugaad': Transgressions within Research Methodologies. In Looi, C. K., Polman, J. L., Cress, U., and Reimann, P. (Eds.). (2016). International Society of the Learning Sciences, pp 1338-1342.

Wu, K., Thorsos, N., & **Kern, A. L.** (2016). Dynamics of tensions and a sense of belonging in an informal peer mentoring community of women faculty. In B. G. Johnanessen (Ed.) *Global Co-Mentoring Networks in Higher Education: Politics, Policies, and Practices.* Dordrecht: Springer.

Adams, A. E., Pegg, J. M., Bottoms, S. Smith Risser, H., Wu, K., & **Kern, A. L.** (2016). Storying our academic career transitions within a peer mentoring community. In B. G. Johnanessen (Ed.) *Global Co-Mentoring Networks in Higher Education: Politics, Policies, and Practices.* Dordrecht: Springer.

Kern, A. L., Roehrig, G. H., Bhattacharya, D., Wang, J., Finley, F., Reynolds, B, & Nam, Y. (2015). Lessons from the place: A climate change professional development for teachers in American Indian Communities. In Mueller, M. & Tippins, D. (Eds.) *EcoJustice, Citizen Science and Youth Activism: Situated Tensions for Science Education.* Dordrecht: Springer International Publishing.

Unterreiner, A., De Four-Babb, J., **Kern, A. L.,** & Wu, K. (2015). Cross mentoring: Womens' way of understanding. In F. Kochan, A. Kent, & A Green. *Uncovering the Hidden Cultural Dynamics in Mentoring Programs and Relationships: Managing the Complexities, Volume 4: Perspectives in Mentoring Series.*

Kern, A. L. & Bottoms, S. (2014). Considering cultural difference in science. In P. Morrell and K. Popejoy (Eds.) *A Few of Our Favorite Things: Teaching Ideas for K-12 Science Methods Instruction.* The Netherlands: Sense Publishers. ISBN: 978-94-6209-777-3.

Bhattacharya, D., Roehrig, G., **Kern, A.,** & Howard, M. (2014). Teacher professional development in the Anthropocene. In D. Dalbotten, G. Roehrig, & P. Hamilton. (Eds.) *Future Earth: Advancing Civic Understanding of the Anthropocene.*

Roehrig, G. H., **Kern, A. L.,** Wood, N. B., & Nyachwaya, J. M. (2010). High school chemistry students' representation of chemical reactions at the atomic/molecular level. In J. Ryan, T. Clark, & A. Collier (Eds). *Assessment in the Disciplines, Vol. 5, Assessment in Chemistry.* Tallahassee, FL: Association for Institutional Research.

Roehrig, G. H., **Kern, A. L.,** & Kruse, R. A. (2008). Faces of reform: The role of the teacher in curriculum implementation. In F. Columbus (Ed.) *Educational Curricula Development and Evaluation.* Hauppauge, NY: Nova Science Publishers.

In revision/In review/In preparation:

Torso, K., & **Kern, A. L.** (under review). Furthering a connection to place: Recognizing Indigenous culture in a western science activity. *The Earth Scientist.*

Navickis-Brasch, A. S., **Kern, A. L.**, Cadwell, J., Fiedler, F. (under review). Culturally relevant engineering activities: Exploring the influence on Native American elementary students. *America Journal of Engineering Education.*

Kern, A. L., & Howard, M. A. (under review). Back to the Earth: Native American youth's notions of culture, community, and STEM. *Children, Youth, and Environment.*

Torso, K., **Kern, A. L.,** & Meyer, C. M. (in review). Culturally-relevant STEM education for Native American Youth: A critical component for Native community self-governance. *Journal of Social Science.*

Cooper, C., Torso, K., Waldropper, C., **Kern, A.**, & Meyer, C. (in preparation). Building community trust in environments with persistent hazards: Towards ethical Social-Ecological research in the Coeur d'Alene Basin, Idaho (USA). *Case Studies in the Environment.*

Wu, K., Beck, M., **Kern, A.,** Howard, M., Cadwell, J,. & Dickerson, M. (in preparation). Mentoring women in STEM fields: A Meta-Synthesis of the synergistic processes and models used with an eye toward a Critical Feminist Framework. *Mentoring & Tutoring: Partnership in Learning.*

Technical/ Professional Reports:

Kern, A., Haynie, K., & Wynne, M. (2016). *National Science Foundation-Back to the Earth (2012-2016) Annual Report.* Final Report.

Kern, A., Haynie, K., & Fiedler, F. (2016). *National Science Foundation-Back to the Earth, Year III (2015-2016) Annual Report.* Annual Report for 2016.

Kern, A., & Haynie, K. (2015). *National Science Foundation-Back to the Earth, Year III (2014-2015) Annual Report.* Annual Report for 2015.

Kern, A., McLain, E., Honwad, S., & Kolden, C. (2014, Decemeber). *NASA-Global Climate Change Education Research Experiences, Modeling, and Data: University of Idaho, Intermountain Climate Education Network (ICE-Net)*. Final Report.

Kern, A., & Haynie, K. (2014). *National Science Foundation-Back to the Earth, Year II (2013-2014) Annual Report.* Annual Report for 2014.

Kern, A., & McLain, E. (2014). *NASA-Global Climate Change Education Research Experiences, Modeling, and Data: University of Idaho, Intermountain Climate Education Network (ICE-Net)*. Annual Report for 2013.

Kern, A., & Haynie, K. (2013). *National Science Foundation-Back to the Earth, Year 1 (2012-2013) Annual Report.* Annual Report for 2013.

Kern, A., & McLain, E. (2012). *NASA-Global Climate Change Education Research Experiences, Modeling, and Data: University of Idaho, Intermountain Climate Education Network (ICE-Net)*. Annual Report for 2012.

Buck, C., **Kern, A. L**, & Reardon, R. (2012). *Science, Technology, Engineering, and Mathematic-Action.* UI NSF EPSCoR Research Infrastructure Improvement (RII) Project, Concept Paper.

Storrs, D., Mihelich, J., Hormel, L., Putsche, L., Miller, B. G., **Kern, A.,** Kane, S., McMurtry, J., Howard, M., & Schwisow, A. (2011, August). *Micron STEM education research project report of focus group research findings.* Moscow, ID: University of Idaho.

Kern, A., & McLain, E. (2011). *NASA-Global Climate Change Education Research Experiences, Modeling, and Data: University of Idaho, Intermountain Climate Education Network (ICE-Net)*. Annual Report for 2011.

Branen, A. L, **Kern, A.,** Anderson, E., Newcombe, D. A., Howell, M., & Godfrey, B. (2009). *Northern Idaho Water Quality Education and Sustainability Center.* NSF EPSCoR Research Infrastructure Improvement (RII) Competition.

Kern, A., Pegg, J., & Wood, N. (2009). *Idaho Science and Literacy in Elementary Schools (ISLES)* Evaluation Report for 2008-09.

Kern, A. L. (2007). *Novice teacher action: Exploring secondary science teachers' actions through practical reasoning.* (Doctoral dissertation, University of Minnesota, 2007). Dissertations Abstracts International. UMI 3287819.

Moore, T., **Kern, A.**, & Collins, J. (2007). *Cooperative, project-based learning reinforced by reflection and presentation in a graduate-level software engineering course* (TR 07-019). Retrieved from the Department of Computer Science and Engineering, University of Minnesota website: http://www.cs.umn.edu/research/technical_reports.php?page=year&year=2007

Refereed Presentations at International, National, Regional, State, and Local Conferences:

Kern, A. L. & Cadwell, J. C. (2019, April). A Mentoring Framework for Engaging K-12 Females in the STEM Pipeline. *American Association for Educational Research, Toronto, Canada.*

Torso, K. & Kern, A. L. (2019, April). Culturally-relevant STEM Education for Native American Youth: A Critical Component for Community Self-governance. *American Association for Educational Research, Toronto, Canada.*

Torso, K. & Kern, A. L. (2018, December). Supporting Native community self-governance through culturally-relevant STEM education. *American Geological Union Annual Meeting, Washington, DC.*

Torso, K. & Kern, A. L. (2018, October). Strengthening Native community self-governance through culturally-relevant STEM education for Native American youth. *American Indigenous Research Association, Polson, MT.*

Torso, K., & Kern, A. L. (2018, October). Furthering connections to place: recognizing Indigenous Knowledge in STEM education. *National Indian Education Association Convention and Trade Show, Hartford, CT.*

Torso, K., & Kern, A. (2018, August). Interdisciplinary collaborative approaches: Analyzing water resource management in the Coeur d'Alene basin. *2018 Ecological Society of America Annual Meeting, New Orleans, LA.*

Torso, K., & Kern, A. (2018, February). Furthering connection to place: Recognizing Indigenous Knowledge in STEM education. *WSU Globalization, Diversity, and Education Conference. Spokane, WA.*

Torso, K., & Kern, A. (2017, October). Multidisciplinary collaborative approaches: Analyzing water resources management in the Coeur d'Alene Basin. *Pacific Northwest Climate Conferences. Tacoma, WA.*

Dickerson, M., Beck, M., Kern, A., Wu., K., & Howard, M. (2017, April). Mentoring Women in STEM Fields: A meta-analysis of the synergistic processes and models used towards occupational advancement. *American Association for Educational Research, San Antonio. TX*

Thorsos, N., Kern, A. L., Wu, K., Ulanoff, S., & Bristol, L. (2017, April). Breaking to code: Developing a mentorship network for minority faculty in academic settings. *American Association for Educational Research, San Antonio. TX.*

Kern, A. L. & Howard, M. (2017, April). Symposium-Using (g)locally relevant authentic inquiries to engage youth in environmental science topics out-of-school: Back to the Earth: A community-based STEM education project. *National Association of Research in Science Teaching, San Antonio, TX.*

Son, J., Mahoney, J., Paul, D., & Kern, A. (2017, Jan). Indigenous knowledge active STEM: Promoting culturally relevant physically active STEM learning and youth development in pre-high school Coeur d'Alene Tribal students. *Hawaii International Conference on Education, Honolulu, HI.*

Mahoney, J., Son, J., Kern, A., & Paul, D. (2016, Oct). Families on four seasons year number two: Building capacity for self-sustaining and culturally-integrated healthy active living, and science, technology, engineering, and math. *4th Annual American Indigenous Research Association Conference, Pablo, MT.*

Honwad, S., Kern, A., Bhattarai, S., Lota-Sisitka, H., & Hoadley, C. (2016, June). Decolonizing research practices and methodologies: Building partnerships for learning sciences research in the 'majority world'. *12th International Conference of the Learning Sciences, Singapore.*

Kern, A. L., Howard, M., Laumatia, L. A., & Honwad, S. (2016, April). Back to the Earth-The growth of a community-based STEM education. *American Association for Educational Research, Washington, D. C.*

Honwad, S., Kern, A. L., Howard, M., & Laumatia, L. (2016, April). Using technology to explore place and culture. *American Association for Educational Research, Washington, D. C.*

Thorsos, N., Wu, K., & Kern, A. L. (2016, April). Strengths and challenges of communication in a global informal women researchers' peer mentoring community. *American Association for Educational Research, Washington, D. C.*

Mahoney, J., Son, J., Kern. A., & Paul, D. (2015, October). Families in four seasons: Building capacity for self-sustaining and culturally-integrated HAL and STEM. *3rd Annual American Indigenous Research Association Conference, Pablo, MT.*

Kern, A., Meyer, C., Laumatia, L., Rasmussen, E., Fiedler, F., & Howard, M. (2015, October). Stumbling into Understanding: Transforming a Partnership from Western-centric to Tribally-Driven through a co-Learning Experience. *3rd Annual American Indigenous Research Association Conference, Pablo, MT.*

De Four-Babb, J., Kern, A., Esnard, T., Cobb-Roberts, D., & Thorsos, N. (2015, April). Lived experiences of women in academia: shaping and reshaping mentoring and scholarship. *American Association for Educational Research, Chicago, IL.*

Kern, A. L., Howard, M., Laumatia, L., Honwad, S., Fiedler, F., & Cadwell, J. (2015, April). Back to the Earth: A culturally intertwined STEM learning experience. *American Association for Educational Research, Chicago, IL.*

Honwad, S. & Kern, A. L. (2015, April). What matters? Instances of science and engineering learning among Native American students in Idaho and Washington. *American Association for Education Research,*

Chicago, IL.

Howard, M. & Kern, A. (2015, April). Beavers to Bigfoot: Design-based science learning in an informal culturally relevant STEM program. *National Association of Research in Science Teaching, Chicago, IL.*

Navickis-Brasch, A., Numkena, N., & Kern, A. (2014, December). ASTE Sponsored Session: The fish weir challenge: A culturally relevant engineering design. *National Science Teachers Association, Regional Conference, Long Beach, CA.*

Navickis-Brasch, A., Kern, A., Howard. M, & Laumatia, L. (2014, November). The Back to the Earth Project. *Spokane River Keepers Conference, Coeur d'Alene, ID.*

Haynie, K., Kern, A., & Numkena, N. (2014, October). Partnering with Tribal communities: Building the foundation for evaluation of the Back to the Earth project. *American Evaluation Association Annual Conference, Denver, CO.*

Kern, A., Howard, M., Laumatia, L., Numkena, N., Fiedler, F., & Honwad, S. (2014, October). Back to the Earth: A STEM in place curriculum. *2nd Annual American Indigenous Research Association Conference, Pablo, MT.*

Dawes. K., Ryan, K., Berven, C., Kern, A., Dawes, D., McNamara, P., Coats, V., Lamar, T., Huston, H., & Giron, U. (2014, August). Collaborative Research: Pathways Project SOS-Making connections using the Science of Sustainability. *NSF-AISL PI Meeting, Washington, DC.*

Dawes, K., Ryan, K., Berven, C., Kern, A., Coats, V., McNamara, & Dawes, D. (2014, July). Project SOS (Science of Sustainability: Development and delivery of a unique model for STEM education. *3rd International STEM Education Conference, Vancouver, Canada.*

Kern, A., Laumatia, L., Rasmussen, E., & Hearing, T. (2014, June). Back to the Earth: A community-based STEM curriculum. *The Idaho State Department of Education-Annual Indian Education Summit, Lewiston, Idaho.*

Honey, R., Honwad, S., Kern, A. Meyer, C., & Laumatia, L. (2014, June). Everyday life science and engineering: Bridging the gap between formal and informal learning among Native American Students in Idaho and Washington. *11th International Conference of the Learning Sciences, Bolder, CO.*

Navickis-Brasch, A., Kern, A. L., Cadwell, J., Fiedler, F., & Laumatia L. (2014, June). Restoring Water, Culture, and Relationships; A Community Based Participatory Research Approach. *American Society for Engineering Education, 121st Annual Conference, Indianapolis, IN.*

Kern, A. L. & Howard, M. (2014, April). Sharing place: The virtual watershed. *American Association for Educational Research, Philadelphia, PA.*

Ryan, K., Giron, U., Dawes, K., Berven, C., & Kern, A. (2014, May). Change through knowledge: The science of sustainability. *Environmental Design Research Association-EDRA45: Building with change. New Orleans, LA.*

Berven, C., Dawes, K., Kern, A., Ryan, K., & McNamara, P. (2014, March). Project SOS: The Science of Sustainability. *American Physics Association March Meeting, 2014, Denver, CO.*

Galbreath, M., & Kern, A. L. (2014, March). Discovering Place: Developing community connections through an informal STEM summer experience for American Indian youth. *National Association of Science Teacher Research, Pittsburgh, PA.*

Galbreath, M., & Kern, A. L. (2014, January). Incorporating indigenous knowledge and STEM in reservation classrooms. *Association of Science Teacher Education Annual Conference, San Antonio, TX.*

Navickis-Brasch, A., Kern, A., & Howard, M. (2013, August). The fish weir engineering challenge: A culturally relevant engineering design. *University of Minnesota, Third Annual STEM Education Colloquium, Minneapolis, MN.*

Navickis-Brasch, A., Kern, A., Cadwell, J., Hearing, T., Laumatia, L., & Fielder, F. (2013, June). How land-use change, changed culture. *American Society for Engineering Education, 120th Annual Conference, Atlanta, GA.* (**Nominated-Best Conference Paper; Winner-Best Section Paper).

Kern, A. L. & Laumatia, L. (2013, April). Teacher and community collaboration: A need for a culturally congruent STEM curriculum. *Association for Educational Research, Annual Conference, San Francisco, CA.*

Howard, M. A., Galbreath M. A., Navickis-Brasch, A. S., & Kern, A. L. (2013, March). Building community for STEM education for cultural preservation. *National Association for Research in Science*

Teaching, Annual Conference, Rio Grande, Puerto Rico.

Tekvert, R., Fay, J., & Kern, A. L. (2013, April). Lunar phases, multicultural awareness, and the simple pleasure of knowing one's plane in the world. *National Science Teachers Association National Conference, Boston, MA.*

Galbreath, M., & Kern, A. L. (2013, January). Engaging American Indian communities in STEM education. *Association of Science Teacher Education, San Antonio, TX.*

Kern, A. L. (2012, October). Attracting high school females to college science. *Research on Women and Education, 38th Annual Fall Conference, Coeur d'Alene, ID.*

Winters, T., Kern, A., & Roundy, M. (2012 October). Climate change science in the classroom. *Idaho Science Teachers Annual Statewide Conference, Boise, ID.*

Olsen, P., Kolden, C., & Kern, A. (2012 October). The ICE-Net matrix-An educational resource for climate science education. *Idaho Science Teachers Annual Statewide Conference, Boise, ID.*

Nam, Y. Roehrig, G. Kern, A., & Reynolds, B. (2012 October). Perceptions and Practices of Culturally Relevant Science Teaching in American Indian Classrooms. *Asia Regional Conference of International History, Philosophy, and Science Teaching Group, Seoul, South Korea.*

De Four-Babb, J., Bristol, L., Kern, A., Unterreiner, A., Norman, K. W., Pegg, J., Bottoms, S., Risser, H., Adams, A., Flavius, T., Lavia, J., Perez, L. Agosto, V., Karanha, Z., & Beck, M., (2012, April). Women's ways of mentoring in the academy. *Association for Educational Research, Annual Conference, Vancouver, B.C., Canada.*

Kern, A. L., Reynolds, B. J., Roehrig, G. H., & Bhattacharya, D. (2012 March). Research based science instruction for Climate Change: A place-based, culturally responsive approach. *National Science Teacher Association, Research Dissemination Conference, Indianapolis, IN.*

Kern, A. L., Morrell, P. D., Lewis, A., Roehrig, G. H., Thomas, J., Zalles, D. R., Reinsvold, L., Brockley, A., Small, M. M., Brey, J., & Simon, M. L. (2012 March). Climate change for the twenty-first century. *National Association for Research in Science Teaching, Annual Conference, Indianapolis, IN.*

Lewis, A., Buhr, S., Thomas, J., Kern, A. L., & Hartry, A. (2012 March). Climate change education: Curriculum, controversy, culture, and critical review. *Symposium at National Association for Research in Science Teaching, Annual Conference, Indianapolis, IN.*

Kern, A. L., Roehrig, G. H., Reynolds, B., Bhattacharya, D., Varma, K., Hougham, R. J., Finley, F., Miller, B. G., Liu, S., Nam, Y., & Karahan, E. (2012, January). Teacher Professional Development for Climate Change Education in Native Communities. *Association of Science Teacher Education, Clearwater, FL.*

Roehrig, G. H., Kern, A. L., Varma, K., Bhattacharya, D., Liu, S., Nam, Y., Reynolds, B., Wang, J., & Hougham, R. J. (2012, January). Enhancing Teachers' Understanding of Climate Change for Teaching Native. *Association of Science Teacher Education, Clearwater, FL.*

Nyachwaya, J. M., Roehrig, G. H., Kern, A. L., Wood, N., Schneider, J., & Mohammed, A. R. (2011, April). College Students' Understanding of the Particulate Nature of Matter Across Reaction Types. *National Association of Research in Science Teaching, Annual Conference, Orlando, FL.*

Gregson, J., Kern, A., Wattam, D., & Saul, M. (2011, March). Teaching/learning career, science, technology, engineering, mathematics, and community education through, in, about, and for the environment. *American Education Research Association, Annual Conference New Orleans, LA.*

Bottoms, S., Pegg, J, Kern, A., Adams, A., Wu-Norman, K., & Riesser, H. (2011, March). Creating a community of practice of emerging academics across institutions. *American Education Research Association, Annual Conference New Orleans, LA.*

Nyachwaya, J., Schneider, J., Roehrig, G., Kern, A., Wood, N., & Mohammed, A. R. (2011, January). College Students' Conceptual Understanding of the Particulate Nature of Matter. *Association of Science Teacher Education, Minneapolis, MN.*

Duvall, E. D., Hansen, M, Major, C., Kern, A. L., Muthersbaugh, D. R., Baker, K., Hammon, M., Palmer, J., & Uphus, M. (2010, April-May). The partner school initiative-Developing a Service-Learning model for an elementary teacher education program. *American Education Research Association, Annual Conference Denver, CO.*

Saul, M., Kern, A., & Adams, A. (2010, Feb.). Preparing teachers for diverse classrooms: A case study of preservice teachers at a tribal school. *6th International Globalization, Diversity, and Education Conference, Spokane. WA.*

Kern, A. L., & Reynolds, B. (2009, October). Middle and high school Native American students' attitudes

about science, math, and engineering. *2009 National American Indian Science and Engineering Society Conference, Portland, OR.*

Kern, A. L. (2009, August). Attracting girls to the College of Science. *Northwestern Women Researchers in Math and Science Education, Missoula, MT.*

Kern, A. L., Wood, N. B., & Roehrig, G. H. (2009, June). High school students' representations of a chemical reaction at the particulate level. *The 64th Northwest Regional Meeting of the American Chemical Society, Tacoma, WA.*

Kern, A. L., & Pegg, J. (2009, May). Scaffolding science inquiry through literacy. *DreamCatching 2009, Knowledge Sharing Session, University of Manitoba, Winnipeg, MB.*

Wood, N. A., Kern, A. L., & Roehrig, G. H. (2009, April). A report of the ways in which high school chemistry students attempt to represent a chemical reaction at the atomic/molecular level. *National Association of Research in Science Teaching, Annual Conference, Garden Grove, CA.*

Guzy, S. K., & Kern, A. L. (2009, April). Constraints and choices; The filed experience of a science education researcher. *National Association of Research in Science Teaching, Annual Conference, Garden Grove, CA.*

Ballard, G., & Kern, A. L. (2009, April). STEM in the Primary Classroom. *National Science Teacher Association, Annual Conference, New Orleans, LA.*

Luft, J. A., Roehrig, G. H., Neakrase, J., Firestone, J., Kirchhoff, A., Guzey, S., Nam, Y., Kern, A. L., Materassi, I., Adams, K., Bang, E.J., & Sande, M. (2008, April). Symposium: Exploring the First Year of Teaching in Secondary Science Classrooms. *National Association of Research in Science Teaching, Annual Conference, Baltimore, MD.*

Kern, A. L., Roehrig, G.H., Kirchhoff, A., & Guzy, S. K. (2008, April). Exploring the first year of teaching in secondary science classrooms: A poster symposium. *National Association of Research in Science Teaching, Annual Conference, Baltimore, MD.*

Sato, M., Kern, A. L., McDonald, E., Rogers, C. A. (2008, March). Back to the rough ground: Instantiations of the practical across the teacher professional continuum. *American Education Research Association, Annual Conference, New York, NY.*

Kern, A. L., Moore, T. J., & Akillioglu, F. C. (2007, October). Full paper-Cooperative learning: Developing an observation instrument for student interactions. *2007 Frontiers in Education Annual Conference, Milwaukee, WI.*

Kern, A. L., Roehrig, G. H., & Sande, M. A. (2007, March). Promoting conceptual chemistry knowledge through inquiry-based instruction. *American Chemical Society, National Meeting,* Chicago, IL.

Sande, M. A, Kern, A. L., & Roehrig, G. H. (2007, January). A teacher's tale of implementing inquiry. *Association of Science Teacher Educators, Clearwater Beach, FL.*

Kern, A.L, Roehrig, G.H., & Luft, J.A. (2006, May). Examination of a science teacher intern program. *Science, Technology, Engineering, and Mathematics Alternative Certification Teaching conference sponsored by the National Science Foundation, Arlington, VA.*

Roehrig, G.H., Kruse, R.A., & Kern, A. L. (2006, April). Teacher and School Characteristics and their Influence on the Implementation of a Reform-Based Chemistry Curriculum. *National Association for Research in Science Teaching, San Francisco, CA.*

Fletcher, S., Brown, M., Kern, A. L., Crawford, H., Luft, J.A., & Roehrig, G.H. (2006, January). Preliminary Findings from a multi-year Secondary Science Teacher Induction Study. *Association of Science Teacher Educators, Portland, OR.*

Kern, A. L., Roehrig, G.H., Kowalski, S.A., & Hick, S.A. (2006, January). Lessons learned during the first year of a science intern-teaching program. *Association of Science Teacher Educators,* Portland, OR.

Kern, A.L. (2005, March). Just because we were taught…. *American Chemical Society, National Meeting, San Diego, CA.*

Roehrig, G.H., Garrow, S., & Kern, A. L. (2005, April). Exploring the implementation of a reform-based curriculum. *National Association for Research in Science Teaching, Dallas, TX.*

Roehrig, G.H., Kruse, R.A., Kern, A.L., & Thompson, N. (2004, April). The Role of Reform-based Curricula in Changing Teachers' Classroom Practices. *National Association for Research in Science Teaching, Vancouver, BC.*

Conference Proceedings:

Honwad, S., **Kern, A.,** Lotz-Sisitka, H., Bhattaai, S., & Hoadley, C. (2016, June). Jugaad: Transgressions

within research methodologies. *Proceedings for the International Conference for the Learning Sciences, Summer 2016.* (Singapore, June 2016)

Dawes, K, Ryan, K., Berven, C., & **Kern, A.** (2013, October). Science and Sustainability. *Proceeding for Association of Science-Technology Centers Annual Conference.* (Albuquerque, NM, October 2013).

Navickis-Brasch, A., **Kern, A.,** Cadwell, J., Hearing, T., Laumatia, L., & Fielder, F. (2013, June). How land-use change, changed culture. *American Society for Engineering Education, 120th Annual Conference, Atlanta, Ga.* (**Nominated Best Conference Paper)

Roehrig, G. H., **Kern, A. L.**, Varma, K, Bhattacharya, D., Karahan, E., Liu, S., Nam, Y, Wang, J., Hougham, R. J., Reynolds, B., Finely, F., & Miller, B. (2012). Teacher professional development for climate change education in Native communities. *Proceedings for Annual Association of Science Teacher Educators (*Clearwater, FL, January 4-7, 2012). (Available at: http://www.cehd.umn.edu/STEM/Research/ASTE2012.asp)

Reynolds, B. J., & **Kern, A. L.** (2012). Climate science content knowledge among teachers: Assessing teacher understanding of climate science prior to professional development. *Proceedings for Annual Association of Science Teacher Educators (*Clearwater, FL, January 4-7, 2012). (Available at: http://www.cehd.umn.edu/STEM/Research/ASTE2012.asp)

Reynolds, B. J., & **Kern, A. L.** (2012). Culturally congruent teaching for climate science. *Proceedings for Annual Association of Science Teacher Educators (*Clearwater, FL, January 4-7, 2012). (Available at: http://www.cehd.umn.edu/STEM/Research/ASTE2012.asp)

Norman, K. W., **Kern, A. L., &** Moore, T. J. (2010). Cooperative learning experience in the context of inter-disciplines for in-service mathematics and science teachers. *Proceedings Book of 3rd International Symposium of Mathematics and Its Connection to the Art and Sciences (MACAS3) Symposium.* Moncton, Canada.

Kern, A. L., Roehrig, G.H., & Sato, M. (2008). The "collegial other": Expertise and deliberation through the experience of colleagues. *Paper presented at the Annual Meeting of the National Association of Research in Science Teaching* (Baltimore, MD, March 31-April 4, 2008).

Sato, M., **Kern, A. L.**, McDonald, E., Rogers, C. A. (2008). Back to the rough ground: Instantiations of the practical across the teacher professional continuum. *Paper presented at the Annual Meeting of the American Education Research Association* (New York City, NY, March 24-28, 2008).

Kern, A. L., Moore, T. J., & Akillioglu, F. C. (2007). Cooperative learning: Developing an observation instrument for student interactions. *Proceeding of the American Society for Engineering Education and Institute for Electrical and Electronics Engineers, 37th Frontiers in Education Annual Conference, USA. ISBN: 1-4244-1084-3.*

Kern, A. L. & Roehrig, G, H. (2006, May). Examination of a science teacher intern program. *White paper from STEM, Alternative Certification Symposium, Arlington, VA.*

Grants and Contracts Awarded:

FUNDED (Funding to date: $3,548,469; at UI only: $3,520,969)

Co-Principal Investigator (for UI). (2018). Honwad, S., Fiedler, F., Kern, A., Meyer, C. & Honey, R. National Science Foundation-DRL, Innovative Technology Experiences for Teachers and Students. *Collaborative Proposal: Voices to Hear-Telling stories, listening to the present, and imagining the future.* ($869,744=UI portion only: $1,343,005=total)

Co-Principal Investigator. (2014). Paul, D., Kern, A., Mahoney, J., & Son, J. University of Idaho, College of Education Faculty Funding Award. *Families in four seasons: Building capacity for self-sustaining and culturally integrated HAL and STEM.* ($11,915).

Principal Investigator. (2013). Kern, A. L., Clark, B., Charbonneau, K., Hearing, T., & Gray, M. University of Idaho, Doceo Center for Innovation + Learning. *Affordances and Challenges of Technology Use in Classrooms on American Indian Reservations.* ($16,916).

Co-Principal Investigator. (2012). Dawes, K. P., Ryan, K., Berven, C. A., & Kern, A. L., National Science Foundation: DRL, Informal Science Education. *Collaborative Research, Pathways Project: Project SOS-Making Connections Using the Science of Sustainability.* (NSF#DRL-1223290, $182,998).

Co- Principal Investigator. (2012). Allen, K., Kern, A. L., & Wattam, D. K. University of Idaho, College of Education, 2012 Dean's Initiative, Review of P-12 School Reform. *Candidate Mentor Supervision Model: A Case Study.* ($11,030)

Principal Investigator. (2012). Kern. A. L., Laumatia, L., Cadwell, J., Haynie. K., & Wu, K. National Science Foundation-DRL, Innovative Technology Experiences for Students and Teachers. *Strategies Project, Back to the Earth.* (NSF#1139657, $1,076,498)

Principal Investigator. (2012). Kern, A. L., Brown, H., McFarland, A., Goc Karp, G., MacKenize, S. H., Scruggs, P., & Stafford-Son, J. University of Idaho, College of Education, 2012 Research Award *Paddle and Bike the Coeur d'Alene Watershed.* ($11,992)

Principal Investigator. (2012). Kern, A. L., & Buck, C. Verizon Foundation Community Gift. *The Environment of Our Community.* (10,542.93)

Co-Principal Investigator. (2011). University of Idaho, College of Education Innovation and Creative Activity Grant. *Urban-Rural-Tribal Intersection: A place-based educational approach to learning science, technology, engineering, mathematics, and community.* ($10,000)

Principal Investigator. (2011-2013). Mulkey, S., Galindo, E., Gregson, J., Johnson, M., Kern, A., Saul, D., Abatzoglou, J., Humes, K., Kolden, C., Vierling, L., Walden, V., & Reynolds. B. National Aeronautical and Space Association. *Global Climate Change Education, Collaborative Development of a Climate Change Curriculum for Classroom in the Intermountain West.* (NASA# NNY10AT77A, $547,727)

Principal Investigator. (2008). Kern, A. L. & Newcombe, D. A. University of Idaho, Sustainable Idaho, Greening the Curriculum Initiative. *Sustainability: Decoding the myth from science knowledge.* ($2,000)

Writer and Co-Principle Investigator. (2008). Excel Foundation Grant. *Science education through water quality testing.* ($6,991)

Principal Investigator. (2008-2010). Kern, A. L, Pegg, J., & Ballard, G. Idaho Department of Education: Mathematics and Science Partnership Grant. *Idaho Science and Literacy in Elementary Schools (ISLES).* ($289,354)

Awardee. (2007). Kern, A. L. University of Minnesota, The Graduate School-Doctoral Dissertation Fellowship. *Teacher Action: Exploring Secondary Science Teachers' Action Through Practical Reasoning.* ($22,500)

Co-Principal Investigator. (2007). Moore, T. J., Kern, A. L., & Norman, K. W. University of Minnesota, Summer Research Support, submitted to the College of Education and Human Development, Office of Research Development. *Exploring teacher beliefs and instructional strategies of mathematics/science in real world contexts.* ($5,000)

ENCOURAGED/RECOMMENDED

Co-Principal Investigator. (2010). Dawes, K. P., Ryan, K., Kern, A., & Berven, C. National Science Foundation, Informal Science Education Program. *Project SOS: Making connections using the science of sustainability.* ($240,145)

Co-Principal Investigator. (2009). Gregson, J. A., & Kern, A. L. National Science Foundation: Advance Technology Education. *Sustainability Development for Technical and Technology Educators.* ($70,000)

SUBMITTED (Total funds submitted: $42,059,802)

Co-Principle Investigator. (2018). Ewers, T., Higgins, L, Kern, A., & Tsao, L. National Science Foundation-AIS-Advancing Informal STEM Learning. *Community STEAM Engine: Building local capacity for STEAM learning.* ($1,999,352)

Principle Investigator. (2018). Kern, A., Cadwell, J., Tekvert, R., Fideler, F., Kobziar, L., & Pratt, A. USDA-National Institute of Food and Agriculture, , Women and minorities in STEM Fields. *Creating a community of mentors from the community.* ($99,893).

Principle Investigator. (2017). Kern, A., Fiedler, F., Kobziar, L., Cadwell, J., Tekvert, R. National Oceanic and Atmospheric Association. *Creating Community Literacy for Wildfire Resilience in the Inland Northwest (WA, ID, MT) Through Development and Dissemination of K12 Teaching Modules.* ($500,000)

Co-Principle Investigator. (2017). Paul, D., Kern, A., Son, J., & Mahoney, J. The Spencer Foundation. *Active in All Seasons.* ($48,990).

Co-Principle Investigator. (for UI). (2016). Meyer, C., Paul, D. A., Kern. A., Wu, K., Honey, R., Fiedler, F., & Honwad, S. National Science Foundation-DRL, Discovery Research in K12. *Level-II, Design and*

Development Project: Hnya'(pqi'n'n-The gathering place. ($403,157=UI portion only: $2,933,533=total)

Co-Principal Investigator (for UI). (2016). Honwad, S., Fiedler, F., Kern, A., & Honey, R. National Science Foundation-DRL, Innovative Technology Experiences for Teachers and Students. *Collaborative Proposal: Voices to Hear-Telling stories, listening to the present, and imagining the future.* ($1,080,196=UI portion only: $1,623,470=total)

Principal Investigator (for UI). (2016). National Science Foundation-DRL, Discovery Research in K12. *Collaborative Research: Designing GLOBE science shops to cultivate student-community partnerships.* ($341,935=UI portion only: $1,358,780=total)

Co-Principal Investigator (for UI). (2016). Honwad, S., Fiedler, F., Kern, A., & Honey, R. National Science Foundation-DRL, Innovative Technology Experiences for Teachers and Students. *Collaborative Proposal: Voices to Hear-Telling stories, listening to the present, and imagining the future.* ($1,080,196=UI portion only: $1,623,470=total)

Principal Investigator (for UI). (2015). Meyer, C., Kern. A., Wu, K., Honwad, S., Fiedler, Fr., Paul, D. A., & Honey, R. National Science Foundation-DRL, Discovery Research in K12. *Level-II, Design and Development Project: Hnya'(pqi'n'n-The gathering place.* ($404,287, UI portion only: $3,000,000, total)

Principal Investigator (for UI). (2015). Abrahms, E., Middleton, M., Honwad, S., Kern, A. L., & Orr, M. J. National Science Foundation-DRL, Discovery Research in K12. *Level-III, Implementation and Improvement Project: Creating a Virtual Professional Development Campus for Science Teacher Engagement in an Educative Sustainability Curriculum.* ($807,477, UI portion only: $4,000,000, total)

Co-Principal Investigator (for UI). (2015). Honwad, S., Fiedler, F., Kern, A., & Honey, R. National Science Foundation-DRL, Innovative Technology Experiences for Teachers and Students. *Collaborative Proposal: Voices to Hear-Telling stories, listening to the present, and imagining the future.* ($734,307, UI portion only: $1,216,659, total)

Principal Investigator. Kern, A. L., Ekins, J., Kay, J, & Tekverk, R. (2015). U. S. Environmental Protection Agency, Local Environmental Education Grant. *North Idaho Community Aquifer Educators.* (Funds requested: $91,000: $121,333, total)

Principal Investigator (for UI). (2014). Meyer, C., Kern. A., Gross-Price. P., & Laumatia, L. National Science Foundation-DRL, Discovery Research n K12. *Full Design and Development Project, Hnya'(pqi/n/m-The gathering place.* ($617,310, UI portion only: $3,000,000, total)

Principal Investigator (for UI). (2013). Meyer, C., Laumatia, L., Kern. A., & Gross-Price. P. National Science Foundation-DRL, Discovery Research n K12. *Full Design and Development Project, Hnya'(pqi/n/m-The gathering place.* ($587,943, UI portion only: $3,000,000, total)

Co-Principal Investigator. (2012). Stauffer, L. A., Bauer, D. H., Ely, R., Flercher, T. R., & Kern, A. L. National Science Foundation-DUE, Noyce Teacher Scholarship. *Developing Secondary STEM Teachers for Rural Idaho.* ($1,422,143)

Co-Principal Investigator. (2012). Roerhig, G. H., Berthelote, A. R., Foufoula-Georgiou, E., Kern, A. l., & Varma, K. National Science Foundation: CCE, Climate Change Education Partnership, Phase-II. *Northern Climate Native Voices.* ($5,613,470)

Principal Investigator (for UI). (2011). Idaho Department of Education: Mathematics and Science Partnership Grant. *Meridian MSP.* ($578,097, UI portion only)

Principal Investigator (for UI). (2011). National Oceanic and Atmospheric Administration: Environmental Literacy Grants for Formal K-12 Education. *Northern Climate Native Voices (in association with the University of Minnesota, the Watershed Education Network-MT).* ($39,008, UI portion only)

Co-Principal Investigator. (2011). National Science Foundation: DRL, Discovery Research in K12. *Teaching and Learning: Career, Science, Technology, Engineering, and Mathematics for the Environmental in Idaho.* ($424,647)

Co-Principal Investigator. (2010). National Science Foundation: DRL, Informal Science Education. *Collaborative Research, Pathways Project: Project SOS-Making Connections Using the Science Of Sustainability.* ($249,455)

Principal Investigator. (2010). National Science Foundation: DRL, Research and Evaluation on Education in Science and Engineering Program (REESE). *Exploring and developing place-based STEM education in rural Idaho communities.* ($1,465,864)

Principal Investigator. (2010). University of Idaho, URO FY2011 Seed Grant. *STEM is sexy: Uncovering the*

science and mathematics in engineering and technology. ($12,000)

Principal Investigator. (2010). National Science Foundation: DRL, Innovative Technology Experiences for Students and Teachers Program. *Strategies Project, Back to the Earth*. ($958,371, resubmitted)

Co-Principle Investigator. (2009). National Science Foundation: DRL, Research and Evaluation on Education in Science and Engineering Program (REESE). *Emerging Research-Pathways-Mapping and assessing students understanding of the particulate nature of matter* (a collaborative project between University of Minnesota, North Dakota State University, and the University of Idaho). ($348,948)

Internal Evaluator. Howard Hugh's Medical Institute. *Integrating Idaho's Research Priorities and Initiatives into Undergraduate Science Education*. ($2,199,990)

Project Personnel. National Science Foundation: Urban Long-Term Research Area. S-*TURNS, Shaping the Trajectory of Urban and Regional Use of Nature*. ($300,000)

Principal Investigator. Idaho School Board of Education: Idaho Technology Incentive Grant. *Research Experience for Science Students: Using the Coeur d'Alene Watershed for Inquiry*. ($22,497)

Principal Investigator. National Science Foundation: Noyce Teacher Scholarship. *Setting a foundation for environmental sustainability through STEM teaching*. ($899,997)

Principal Investigator. National Science Foundation: Innovative Technology Experiences for Students and Teachers Program. *Strategies Project: Back to the Earth*. ($1,177,801)

Co-Principle Investigator. National Science Foundation: Discovery Research in K12 Program. *Project REAL (Renewable Energy Active Learning), Collaborative project with the University of Minnesota*. ($3,440,588)

Principal Investigator. University of Idaho, Sustainable Idaho Project. *Students' for watershed sustainability (SWSS)*. ($7,500)

Principal Investigator. U.S. Department of Education, Office of Postsecondary, Teachers for a Competitive Tomorrow Grant. *STEM Education for Sustainability, Master of Education Program*. ($944,703)

Principal Investigator. National Science Foundation: Robert Noyce Scholarship Program. *Setting a foundation for sustainability through STEM teaching in Idaho*. ($683,271)

K-12 PROFFESIONAL FUNDED GRANT PROJECTS

(2002) AT&T Broadband Grant. *Science Mentors and the Web*. ($5,000)

(2002) Newberg School Business Partnership. *Science Mentors*. ($400)

(2001) Newberg Education Association. *Science Mentors*. ($300)

(2000) Newberg Education Association. *Laboratory Equipment*. ($1,000)

(2000-2003) Director. Science and Math Consortium for the Northwest Schools Grant. *Professional Development for Science Standards*. ($33,000)

(2000-2003) Title V, No Child Left Behind Federal Funding, *Science Mentors*. ($4,000)

SERVICE:

Major Committee Assignments:

University Level, Campus-wide (CdA and Moscow)

***Member, University of Idaho, University-Level Promotions Committee. 2018-19.*

Member, University of Idaho, Faculty Senate-UINI (North Idaho) Representative. 2017-2020.

Speaker, Renfrew Interdisciplinary Colloquium. Engaging Society Through Education, Sept. 2011.

Search Committee Member, University-wide Environment Science and Water Resource Director, 2011.

Member, University of Idaho STEM Education Signature Area Visioning Committee, 2011.

Facilitator and Technical Coordinator, "Bridges to Careers for Women in Math and Science." (Annual recruiting event for 10th grade women to UI-College of Science, College of Education, and UI-Coeur d'Alene), 2008, 2009, 2010, 2011, 2012, 2013, 2017.
http://www.uidaho.edu/cda/newsevents/features/research/womeninscience2010
http://www.uidaho.edu/cda/aboutus/youtubevideos

Facilitator and Technical Coordinator, Northwest Indian Youth Conference, "CSI-H2O", 2009.

College Level, College of Education

Member, Promotion and Tenure Committee for CoEd Faculty, 2018-19.

Search Committee Member, CoE, Dean, 2016.

Member, Promotion and Tenure Committee for CoEd Faculty, 2016-17.
Committee Member, CoE Faculty Affairs/Awards Committee, 2014-present.
Search Committee Member, CoE, Associate Dean of College, 2011
Search Committee Member, for CoE-Department of Health, Physical Education, Recreation, and Dance, Faculty (Assistant Professor), 2011.
Committee Member, COE-Admission, Petitions, and Retention Committee, 2010-2011.
Committee Member, COE-Graduate Policy and Research Committee, 2009-present.
Writer/Collaborator for University of Idaho-College of Education, "Land-grant University Alliance-Teacher Education for Native Americans." 2009, 2010.
Search Committee Member, COE-CdA Administrative Assistant, 2009.
Invited Speaker, ED570. Title: A case for qualitative research: Actions and observations, 2008.
Search Committee Member, CoE Communications Director, 2008.

Departmental Level, Curriculum and Instruction

Committee member, CEHHS, College Promotions and Tenure for Tenured Faculty, 2018-19.
Committee member, CEHHS, College Promotions and Tenure for Clinical Faculty, 2018-19.
Committee Chair, CEHHS, Department of Curriculum and Instruction, Promotion and Tenure for C&I Faculty, 2017-18.
Committee Chair, 3rd Year Review Committee for C&I clinical faculty member, Dr. Mary Jaglois Orr, 2015.
Committee Chair, 3rd Year Review Committee for C&I faculty member, Dr. Janine Darragh, 2014.
Search Committee Chair, CoE-CdA, Department of Curriculum and Instruction, Assistant Professor-Generalist, 2012.
Reviewer, Thomas Wright Fellowship Applicants. 2011, 2012.
Member, CoE, Department of Curriculum and Instruction, Promotion and Tenure Committee. 2011, 2014, 2015, 2016.
Search Committee Chair, CoE-CdA, Elementary Science Education Instructor, 2011.
Search Committee Member, CoE, Department of Curriculum and Instruction, Mathematics Education Faculty (Associate Professor), 2011.
Search Committee Chair, CoE-CdA, Elementary Mathematics Education Instructor, 2011.
Program Coordinator, Advanced Studies Program Area in Curriculum and Instruction. 2010-2013.
Search Committee Member, CoE-Department of Curriculum and Instruction-Elementary Science and Technology Education, Assistant Professor, 2010.
Committee Member, C&I Department, Teacher Education Admissions Requirements, An Ad Hoc Committee, 2010
Reviewer and Developer, University of Idaho-Department of Curriculum and Instruction-Curriculum and Instruction Innovation Award (a one-time only award for $1,000), 2010.
Reviewer and Developer, for Departmental guideline for professional travel, 2009.

Outreach Service:

Advisor, STEM Educator, Coeur d'Alene Tribe, State Tribal Education Partnership Grant, 2016-present.
Faculty Participant, University of Idaho-Coeur d'Alene-Graduate School Fair at NIC, November, 2018.
Recruitment, Coeur d'Alene Tribe Career and Post High School Fair, November, 2018.
Judge, University of Idaho-Community Water Resource Center Youth Water Summit, May 2018.
Panel Reviewer, NSF, 2017 Discovery Research K-12 Grant Program, January 2018.
Judge, INVENT Idaho (www.inventidaho.com), 29th Regional competition, January 2018.
Faculty Participant, *North Idaho-Graduate School Fair at UI-CdA*, November 2017.
Faculty Participant, *UI-CdA Women in Science Annual Event*, October 2017.
Reviewer, *Cultural Studies in Science Education*, since August 2017
Reviewer, *Childhood Education*, since January 2016.
Judge, INVENT Idaho-Hayden Meadows local competition, October 2016.
Instructor, Graduate Special Topics Course-Introduction to Indigenous Research Theories, delivered to Coeur d'Alene Tribal members and allies on the Coeur d'Alene Reservation, August-December, 2015.
Member, *Association for Science Teacher Education (ASTE)*-Conference Program Committee, January,

2014 to February, 2015.
Coordinator, STEM-Cooperative Learning for NSF-Project SOS, January 2013 to August 2015.
Director, *Back to the Earth Program*, see http://uibtte.org/, May 2012 to May 2016.
Reviewer, *Chemistry Education and Practice,* since 2013.
Reviewer and Member Editorial Review Board, *Journal of Science Teacher Education (JSTE),* since February 2013.
Panel Reviewer, NSF, Discovery Research K-12, Grant Program, 2013
Director, *UI-CoE-Paddle and Bike the Watershed Project*, 2012
Director, *UI-CdA-Environment of Our Community Summer Youth STEM Project*, 2012
Invited Attendee, Idaho Economic Development Summit, 2012-STEM Summit, 2012
Panel Reviewer, NSF, Discovery Research K-12 Grant Program, 2012
Coordinator, *UI-CoE Urban-Rural-Tribe Teacher-Educator Panel*, 2011
Reviewer, NASA Innovations in Climate Education Project, Products, 2011
Director, *NASA Inter-mountain West Climate Network (Teacher Professional Development) Program*, see http://www.uidaho.edu/ed/research/signatureareas/nasagcce, 2011-present
Member, Advisory Board. Ramsey Elementary School-A Science Magnet, Coeur d'Alene, ID, 2010-present
Coordinator, Science Professional Development, Ramsey Elementary School-A Science Magnet. Coeur d'Alene, ID, 2010
Reviewer, Annual Conference-National Association for the Research in Science Teaching, 2008, 2009, 2010, 2016, 2017
Reviewer, Annual Conference-American Educational Research Association. SIG: 7. 2009, 2010, 2017
Director, *Idaho Science and Literacy in Elementary Schools (Teacher Professional Development Program)*, 2008, 2009
Invited Presenter, University of Minnesota-Department of Curriculum and Instruction. CI-5821 Elementary mathematics methods Presentation: Considering children's mathematical conceptions and misconceptions, 2007
Mentor, STEMMP-Science, Technology, Engineering, and Mathematics Mentoring Program, a joint project between the University of Minnesota and the Minnesota Department of Education, 2006-2007
Graduate Student Member, University of Minnesota-Department of Curriculum and Instruction, ad hoc Research Committee, 2006-2007
Panel member and presenter, University of Minnesota-Department of Curriculum and Instruction, New Graduate Student Orientation and Graduate Student Research Presentations, 2006
Coordinator and Chairperson, University of Minnesota-Department of Curriculum and Instruction, Science Education, Graduate Student Journal Club, 2005-2007
Facilitator, Oregon Department of Education Science Instructional Materials Evaluation, 2001
Teacher Liaison, Oregon Science Teacher Association and Oregon Department of Education, 2000-2003
Co-chairperson, Oregon Science Teacher Leader Institute, yearly one week intensive teacher workshop facilitating reform science teaching, 2000-2003
Oregon Science Teacher Leader Cadre, Regional trainer/facilitator, 1999-20003
Instructional Leader, Science Department Newberg High School, 1998-2003
Chairperson, Science Standards and Staff Development, Newberg School District, 1998-2003
Evaluator, State of Oregon State Science Benchmarks, 1994-1996
Evaluator, AAAS-Project 2061, Science Benchmarks, 1994-1995

Professional and Scholarly Organizations:

American Chemical Society
American Educational Research Association
Association for Science Teacher Educators
National Association for Research in Science Teaching
National Science Teacher Association

Honors and Awards:

University of Idaho, College of Education, 2010 Award for Scholarship, 2010-2011 Academic year.
University of Minnesota Doctoral Dissertation Fellowship, Fellow, 2007-2008 Academic year.
Newberg School District, Crystal Apple Award-Outstanding High School Teacher, 2003
James Conaway Student Teacher of the Year, Linfield College, 1993.

PROFESSIONAL DEVELOPMENT:

Teaching:

2018, February. *The 2018 Virtual Conference-Transforming the Teaching &Learning Environment.* University of Idaho, Center for Excellence in teaching & Learning and Distance & Extended Education.
2017, May. *Invited workshop: Podcasting to tell science stories!* University of New Hampshire-Weaving Strands/Stories, Grant Project Workshop.
2012, June. *BbLearn Hands-on Workshop*. UI Distance and Extended Education workshop.
2012, March. *Teacher Professional Assessment (TPA)*. UI CoE C&I special workshop.
2011, April. *Taskstream Training-II*. UI CoE C&I special workshop.
2010, December. *Task-stream Assessment Training.* UI CoE C&I special workshop
2009, May. *The pre-service connection: Environmental and Sustainability Education.* TOTOS workshop.
2009, March. *Evidence-teacher preparation in environmental/sustainability education.* TOTOS workshop.
2008, September. *Faculty Fellows Service-Learning Workshop*. UI Career and Professional Planning.
2008, March. *CE6 Training Workshop.* UI College of Education Workshop.

Scholarship:

2018, February-March. *Idaho State Department of Education, The Danielson Framework of Professional Teaching.*
2011, April. *Mixed data analysis techniques: A comprehensive step-by-step approach.* AERA workshop.
2008, March. *Using videocases to support and study preservice teacher learning: Two approaches.* NARST Pre-conference workshop.

Administration/Management:

2012-13. *University of Idaho, Leadership Academy, Cohort IV.*
2011, April. *Helping STEM researchers strengthen their NSF proposals by integrating K-12 STEM education.* AERA workshop.
2010, April. *NSF Funding Workshop*. NSF and Boise State, ID.