

Devarati Bhattacharya

University of Nebraska-Lincoln, School of Natural Resources

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EDUCATION

University of Minnesota, STEM Education Center (St. Paul, MN), 2016
Ph.D. in Curriculum and Instruction –Science Education. (December, 2016)
Dissertation: Conceptualizing in-service secondary school science teachers' knowledge base for promoting understanding about the science of global climate change.

Gurukul Kangri University, Haridwar, UA, India 2000
MS in Environmental Sciences (July, 2000)
Thesis: Effect of Cypermethrin, a pyrethroid on the microbial consortium in agricultural soil of Northern India.

Kurukshetra University, Kurukshetra, India 1998
BS in Biology (August, 1998)
 Majors: Botany, Zoology; Minor: Chemistry
Research Paper: Local Plant species and their ethnobotanical uses.

PROFESSIONAL EXPERIENCE

Research

University of Nebraska-Lincoln: K-16 STEM Education Fellow 2015-present
 School of Natural Resources.

University of Nebraska-Lincoln: Instructor, Elementary Science Education Fall 2016
 Teaching, Learning and Teacher Education.

University of Minnesota, Minneapolis: STEM Education Research Assistant 2014-2015
 Center for Youth Development.

University of Minnesota, Minneapolis: Doctoral Research Fellow 2013-2014
 STEM Education Center.

University of Minnesota, Minneapolis: Graduate Research Assistant 2010- 2013
 STEM Education Center.

Minnesota State University, Mankato: Lab Assistant 2006-2010
 Department of Biology.

Department of Natural Resources, Louisiana: Research Assistant 2004-2006
 Coastal Restoration Division.

Gurukul Kangri University, Haridwar, India: Research Associate 2000-2004

Teaching

University of Nebraska-Lincoln: Instructor, Elementary Science Education Fall 2016
 Teaching, Learning and Teacher Education.

Minnesota State University, Mankato: Teaching Assistant, Introductory Biology 2006-2010
 Department of Biology,

University of Louisiana, Lafayette, LA: Lab Instructor, Anatomy 2004-2006
 Department of Biology,

MAC Elementary School, Haridwar, India: Curriculum Specialist and Instructor (K-5) 1998-2004

REFEREED JOURNALS

Liu, S., Roehrig, G.H., **Bhattacharya, D.**, & Varma, K. (2015). In-service teachers' attitudes, knowledge and classroom teaching of Global Climate Change. *Science Educator*, 24(1).

BOOK CHAPTERS

Bhattacharya, D., Roehrig, G. H., Kern, A. L., Howard, M. (2014). Teaching the Anthropocene in K-12 settings. In Dalbotten, D., Roehrig, G.H., and Hamilton, P. (Eds.) *Future Earth: Advancing the civic understanding of the Anthropocene*. New York: Wiley.

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.) *Eco-Justice, Citizen Science and Youth Activism: Situated Tensions for Science Education*. Switzerland: Springer.

MANUSCRIPTS SUBMITTED

Bhattacharya, D., Ingram, E., Kegley, M., Derowitsch A., & Forbes, C. (under review). Using corn to foster elementary students' understanding of plant life cycle, inheritance and genetic variation. In *Science & Children*.

Forbes, C.T., **Bhattacharya, D.**, Baumfalk, B., Vo, T., & Welch, G. (submitted). Impact of model-based science instruction on 3rd-grade students' scientific explanations for hydrologic cycling.

Bhattacharya, D., Adams, K, Mittelstet, T. (under review). Learning Centers- A Supporting Technique for Modeling in Science. In *Science & Children*.

Jedd, Theresa, **Bhattacharya, D.**, Hayes, M., Pesek, C.(submitted) Making Do' with Little: An Assessment of Drought Impacts and Management in Prairie and Sandhills State Parks, In *Environmental Management*.

Bhattacharya, D., Roehrig, G.H., Karahan, E., Liu, S. and Varma, K. (in preparation). Using photo elicitation interview to conceptualize in-service secondary school science teachers' knowledge base for teaching global climate change.

OTHER PUBLICATIONS

Wang, H.H., **Bhattacharya, D.**, Evans, E.& Jirik, P. (2017). Designing with the Purpose of Scientific Investigation: Design and Conducting Scientific Experiment on Insect Pollinator Houses. *Science Scope*. 41(3), 41-49

Bhattacharya, D., Guzey, S., Miller, C. & Moore, T. (2015). Artificial Floating Islands: An integrated STEM Unit. *Science Scope*, 38(9), 63-69.

Roehrig, G.H., Kern, A. L., Varma, K., **Bhattacharya, D.**, Liu, S., Nam, Y., Reynolds, B., Wang, J., Hougham, R. J. (2012) Enhancing Teachers' understanding of climate change for teaching Native American students. Association of Science Teacher Education (ASTE) conference proceedings, Clearwater, Florida, Jan. 4-9, 2012.

CONTRIBUTIONS TO GRANT WRITING & EXTERNAL FUNDING

- High School Students' Climate Literacy Through Epistemology of Scientific Modeling- NSF-DRL# 1720838 and 1719872 (CLiMES; NSF DRK-12, DRL 1720838 1719872), \$1.7M, 9/1/2017-8/31/2021, awarded May, 2017). This funding will be used for executing a 4-year, mixed-methods, design-based research project aimed at designing, developing, implementing and assessing a climate education module for secondary science classrooms. This curriculum will be based on EzGCM (Easy Global Climate Modeling) a Global Climate Model used by NASA scientists for climate predictions, will be used by over 50 secondary teachers and 3000 students in the Lincoln Public School district.
- University of Minnesota, Doctoral Dissertation Fellowship (\$24,000) 2013-2014
- Jhumki Basu NARST Equity Scholars Award (\$600) 2013
- Mortenson Family Foundation Environmental Grant (\$2000) 2013
- Women's Philanthropic Leadership Circle Award (\$2000) 2013

- University of Minnesota, Department of Curriculum and Instruction Travel Award (\$700) 2011-2012

CURRICULUM DEVELOPMENT

Modeling based curriculum focused on Climate literacy, University of Nebraska-Lincoln	Ongoing
Understanding Inheritance in Corn (UnICORN), University of Nebraska-Lincoln	Ongoing
Native Pollinator Education, University of Minnesota	2014-2015
CYCLES- Teachers discovering climate change from a native perspective, University of Minnesota	2011-2014
Reach for the Sky, University of Minnesota	2009-2010
AGAPE School-Environmental Science, St. Paul, MN	2014
Project BRAIN-U, University of Minnesota	2010-2011

CONFERENCE PAPER PRESENTATIONS

Peer-reviewed

- McNeill, K., Forbes, C.T., **Bhattacharya, D.**, Berland, L., Miller, E., Manz, E., Vo, T., Zangori, L. (**Accepted**). *Shifting elementary science classrooms to support science practices*. Paper-set accepted for the 2018 annual meeting of the National Association of Research in Science Teaching (NARST), Atlanta, GA.
- Bhattacharya, D.**, Forbes, C.T., Ingram, E., Hawley, L., Stevens, J. & Cisterna, D. (**Accepted**). *Developing 3rd Grade students' Understanding of Inheritance using a Model-based Curriculum*. Paper accepted for the 2018 annual meeting of the National Association of Research in Science Teaching (NARST), Atlanta, GA.
- Vo, T., **Bhattacharya, D.**, Baumfalk, B., Zangori, L., Welch, G., Forbes, C. (**Accepted**). *Examining the impact of a modeling enhanced water unit on 3rd grade students' scientific explanations*. Submitted to the American Educational Research Association (AERA) annual 2018 meeting, New York City, NY.
- Bhattacharya, D.**, Forbes, C.T., Chandler, M. & Roehrig, G. (**2017, December**). *Promoting climate literacy among in-service secondary science teachers requires epistemological knowledge and understanding*. Proposal submitted for the 2017 American Geophysical Union (AGU), New Orleans, LA
- Baumfalk, B., Forbes, C.T., **Bhattacharya, D.**, Vo, T., & Welch, G. (**Accepted**). *Applying a systematic approach to measuring intervention fidelity*. Paper accepted for the 2017 meeting of the American Evaluation Association (AEA), Washington, D.C.
- Forbes, C.T., **Bhattacharya, D.**, Baumfalk, B., Vo, T., & Welch, G. (**2017, August**). *Impact of model-based science instruction on 3rd-grade students' scientific explanations for hydrologic cycling*. Paper accepted for the European Science Education Research Association (ESERA), Dublin, Ireland.
- Bhattacharya, D.**, Ingram, E., Forbes, C., Wolken, T. & Kegley, M. (**2017, April**). *Using corn to foster elementary students' understanding of plant life cycle, inheritance and genetic variation*. Paper presented at the 2017 annual meeting of the National Association of Research in Science Teaching (NARST), San Antonio, TX.
- Forbes, C.T., Baumfalk, B., **Bhattacharya, D.**, Vo, T., & Welch, G. (**2017, April**). *Impact of model-based science instruction on 3rd-grade students' scientific explanations for hydrologic cycling*. Paper presented at the 2017 annual meeting of the National Association of Research in Science Teaching (NARST), San Antonio, TX.
- Bhattacharya, D.**, Forbes, C., Ingram, E. (**2017, January**). *Using corn as a model organism to foster 3rd-grade students' learning of genetics and inheritance*. Experiential session presented at the Association of Science Teacher Education (ASTE), Des Moines, IA.
- Szostkowski, A., **Bhattacharya, D.** & Roehrig, G. (**2017, January**). *"I wanted the experts to come and teach me". How seven secondary science teachers conceptualize culturally responsive science education*. Paper presented at the Association of Science Teacher Education (ASTE), Des Moines, IA.

- Szostkowski, A., **Bhattacharya, D.** & Roehrig, G. (2016, November). *“I wanted the experts to come and teach me” Findings from CYCLES*. Paper presented at the 115th American Anthropological Association (AAA) Annual Meeting, Minneapolis, MN.
- Bhattacharya, D.**, Karahan, E. Roehrig, G., & Varma, K. (2015, January). *Exploring in-service secondary school science teachers' knowledge base for teaching climate change*. Paper presented at the annual meeting of the Association of Science Teacher Education (ASTE), Portland, OR.
- Langholz, A. **Bhattacharya, D.**, & Roehrig, G. (2015, April). *Exploring culturally relevant teaching and learning of global climate change in science class rooms*. Paper presented at the annual meeting of the Association of Science Teacher Education (ASTE), Portland, OR.
- Bhattacharya, D.**, Karahan, E. Roehrig, G., & Varma, K. (2015, April). *Secondary school science teachers' knowledge base for teaching global climate change*. Paper presented at the National Association for Research in Science Teaching (NARST), Chicago, IL.
- Karahan, E., Andzenge, S.T., **Bhattacharya, D.**, Roehrig, G.H. (2015, April). *Eliciting students' understanding of river geography and socio-scientific issues through a critical response protocol*. Paper presented at the National Association for Research in Science Teaching (NARST), Chicago, IL.
- Bhattacharya, D.**, Karahan, E. Roehrig, G., & Varma, K. (2015, April). *Developing and assessing conceptual thinking about vulnerability towards global climate change in teachers serving Native American communities*. Paper presented at the American Education Research Association (AERA), Chicago, IL.
- Bhattacharya, D.**, Karahan, E. Roehrig, G., & Varma, K. (2015, March). *In-service secondary school science teachers' knowledge base for teaching climate change*. Paper presented at the National Science Teachers Association (NSTA), Chicago, IL.
- Bhattacharya, D.**, Karahan, E. Roehrig, G., & Varma, K. (2014, October). *Secondary school science teachers' knowledge and practices for teaching global climate change*. Presented for NASA Innovations in Climate Change Education Program at the Geological Society of America (GSA), WI.
- Liu, S., **Bhattacharya, D.**, Varma, K., Roehrig, G.H. (2014, April). *Exploring teachers' argumentation about global climate change*. Paper presented at American Education Researchers Association (AERA), Philadelphia, PA.
- Bhattacharya, D.**, Liu, S., Karahan, E. Roehrig, G., & Varma, K. (2014, April). *Using photo elicitation interview along with concept mapping to conceptualize in-service secondary school science teachers' knowledge base for teaching climate change*. Paper presented at the National Association for Research in Science Teaching (NARST), Pittsburgh, PA.
- Bhattacharya, D.**, Liu, S., Karahan, E. Roehrig, G., & Varma, K. (2014, January). *Using photo elicitation interview to conceptualize in-service secondary school science teachers' knowledge base for teaching climate change*. Paper presented at the annual meeting of the Association of Science Teacher Education (ASTE), San Antonio, TX.
- Karahan, E., **Bhattacharya, D.**, Liu, S., Roehrig, G., & Varma, K. (2014, January). *Secondary science teachers' understanding of socio scientific issues and its effects on their curriculum implementation plans*. Paper presented at the annual meeting of the International Conference of Association of Science Teacher Education (ASTE), San Antonio, TX.
- Liu, S., Karahan, E., **Bhattacharya, D.**, Roehrig, G., & Varma, K. (2014, January). *In-service teachers' argumentation and epistemology about global climate change*. Paper presented at the annual meeting of the International Conference of Association of Science Teacher Education (ASTE), San Antonio, TX.
- Karahan, E., **Bhattacharya, D.**, Bilici, S., & Roehrig, G.H. (2013, September). *Enhancing Native American students' cognitive knowledge and regulation through the use of KWL charts in a place-based learning module*. Paper presented at the annual meeting of the European Educational Research Associations (EERA), Istanbul, Turkey.
- Karahan, E., **Bhattacharya, D.**, & Roehrig, G.H. (2013, September). *Understanding global climate change: improving knowledge and conceptual understanding of in-service secondary school science teachers*. Paper presented at the annual meeting of the European Educational Research Associations (EERA), Istanbul, Turkey.

- Bhattacharya, D.**, Karahan, E., Nam, Y., Liu, S., Varma, K., Roehrig, G.H. (2013, April). *In-service secondary school science teachers' conceptions about global climate change*. Paper presented at the American Education Researchers Association (AERA), San Francisco, CA.
- Bhattacharya, D.**, Karahan, E., Roehrig, G., Bilici, S. (2013, April). *Native American students' understanding of watersheds and their management*. Paper presented at the American Education Researchers Association (AERA), San Francisco, CA.
- Liu, S., **Bhattacharya, D.**, Varma, K., Roehrig, G.H. (2013, April). *The role of scientific reasoning in teachers' attitudes and knowledge about climate change*. Paper presented at American Education Researchers Association (AERA), San Francisco, CA.
- Liu, S., **Bhattacharya, D.**, Varma, K., Roehrig, G.H. (2013, March). *The role of argumentation in teachers' attitudes and knowledge about climate change*. Paper presented at National Association for Research in Teaching (NARST), Rio Grande, Puerto Rico.
- Bhattacharya, D.**, Karahan, E., Roehrig, G. H. (2013, March). *Implementation of a place-based, technology integrated approach for teaching global climate change content*. Paper presented at the National Life Discovery Conference of the Ecological Society of America (ESA), St. Paul, MN.
- Bhattacharya, D.**, Karahan, E., Roehrig, G., Bilici, S. (2013, January). *Implementation of a place-based approach to enhance students' understanding of watershed management*. Paper presented at the annual meeting of the Association of Science Teacher Education (ASTE), Charleston, SC.
- Liu, S., Roehrig, G., **Bhattacharya, D.** & Varma, K. (2013, January). *Exploring in-service teachers' attitudes, knowledge and classroom practices about global climate change*. Paper presented at the annual meeting of the Association of Science Teacher Education (ASTE), Charleston, SC.
- Bhattacharya, D.**, Karahan, E., Nam, Y., Wang, J., Liu, S., Tierney, B., Varma, K., Roehrig, G.H. (2012, March). *Conceptualizing in-service secondary school science teachers' knowledge base for climate change content*. Paper presented at International conference of National Association for Research in Science Teaching (NARST), Indianapolis, IN.
- Roehrig, G.H., Kern, A. L., **Bhattacharya, D.**, Lewis, A., Zalles, D. Brickley, A., Small, M.M. Brey, J. (2012, March) Presider: Poster Symposium - *Climate Change Education for the Twenty-First Century*. Paper presented at the International Conference of National Association for Research in Science Teaching (NARST), Indianapolis, IN
- Liu, S., Wang, J., Varma, K., Roehrig, G., Karahan, E., Nam, Y. & **Bhattacharya, D.** (2012, April). *In-service teachers' attitudes and beliefs about climate change*. Paper presented at the annual meeting of the National Association for Research in Science Teaching (NARST), Indianapolis, IN.
- 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 American students*. Paper presented at the Association of Science Teacher Education (ASTE), Clearwater, FL.
- Kern, A. L., Roehrig, G.H., Reynolds, B., **Bhattacharya, D.**, Varma, K., Hougham, R. J., Finley, F., Miller, B., Nam, Y., Varma, K., Wang, J. & Karahan, E. (2012, January). *Teacher professional development for climate change education in Native communities*. Paper presented at the Association of Science Teacher Education (ASTE), Clearwater, FL.
- McClelland, J., **Bhattacharya, D.**, Hoelscher, M., Haroldson, R., Roehrig, G.H., & Dubinsky, J. (2012, January). *An exploration of different approaches to classroom implementation following a workshop on Neuroscience*. Paper presented at the Association of Science Teacher Education (ASTE), Clearwater, FL.
- Roehrig, G.H, Campbell, K. M., Dalbotten, D., **Bhattacharya, D.**, Nam, Y., Varma, K., & Wang, J. (2011, December). *Conceptualizing in-service secondary school science teachers' knowledge base for climate change content*. Paper presented at the American Geophysical Union (AGU), San Francisco, CA.
- Dubinsky, J., Roehrig, G.H., Guzey, S.S., McClelland, J., Billington, B., & **Bhattacharya, D.** (2011, January). *BrainU: A teacher professional development program on neuroscience*. Paper presented at the Association of Science Teacher Education (ASTE), Minneapolis, MN.

Bhattacharya, D., Joshi, N. (2002, March). *Effect of Cypermethrin on the soil microbial consortium*, Paper presented at the National Seminar on the Environmental Hazards and Future Generations, Chinmaya Degree College, Hardwar, India.

Non-peer reviewed

Ingram, E., Kegley, M., Cisterna, D., **Bhattacharya, D.**, & Forbes, C. (2017, September). Using corn as a model organism to foster elementary students' understanding of core concepts about inheritance. Presented at the Nebraska Association of Science Teachers (NATS/NATM) Fall conference, Kearney, Nebraska.

Chandler, M, **Bhattacharya, D.**, Forbes, C., Sohl, L., Zhou, J. & Bush, D. (2017, June). *Using global climate models in the classrooms*. Experiential session presented at the Climate Generation Summer Institute 2016, Climate Generation: A Will Steger Legacy, Minneapolis, MN.

Bhattacharya, D., Forbes, C., Ingram, E. (2016, December). *Teaching lifecycles using modeling*. Experiential session presented at the Nebraska K-12 Education Summit, Lincoln, NE.

Bhattacharya, D., Forbes, C., Ingram, E. (2016, October). *Teaching lifecycles using modeling. Results from UnICORN-Using corn as a model organism to foster 3rd-grade students' learning of genetics and inheritance*. Experiential session presented at the regional conference for National Science Teacher Education (NSTA), Minneapolis, MN.

Chandler, M, **Bhattacharya, D.**, Forbes, C., Sohl, L., Zhou, J. & Bush, D. (2016, June). *Using global climate models in the classrooms*. Experiential session presented at the Climate Generation Summer Institute 2016, Climate Generation: A Will Steger Legacy, Minneapolis, MN.

Bhattacharya, D., Roehrig, G., & Kern A. (2015, January). *Secondary school implementation of climate change curriculum in Native American communities*. Paper presented at the National Energy Education Summit (NEES, NCSE), Washington DC.

Kern, A. L., Hougham, R. J., Roehrig, G. H., & **Bhattacharya, D.** (2012, March). *Research-based science instruction for climate change: a place-based culturally responsive approach*. Paper presented at the Research Dissemination Conference: Looking Toward the New Framework for the Next Generation Science Standards at the National Science Teacher Association (NSTA), Indianapolis, IN.

Roehrig, G.H., Varma, K. Campbell, K., Dalbotten, D., **Bhattacharya, D.**, Nam, Y., Wang, J., Liu, S. & Karahan, E. (2011, August). *Teachers' understanding of climate change for teaching Native American students*. Paper presented at the Science, Technology, Engineering and Mathematics Colloquium, Continuing Education and Conference Center, St. Paul, MN.

Bhattacharya, D., Ruhland, C.T. (2008, March). *Effect of UV radiation on litter decomposition various deciduous species*. Paper presented at the Graduate Research Conference, Minnesota State University, Mankato, MN.

CONFERENCE POSTERS

Bhattacharya, D., Forbes, C.T., Ingram, E., Hawley, L., Stevens, J. & Cisterna, D. (2018). Supporting Scientific Modeling Practices in Elementary Science Instruction about Inheritance. Poster accepted for the 2018 annual meeting of the National Association of Research in Science Teaching (NARST), Atlanta, GA.

Bhattacharya, D., Ingram, E., Forbes, C., Wolken, T., Kegley, M. & Keshwani, J. (2016). *Using corn to foster elementary students' understanding of plant life cycle, inheritance and genetic variation*. Poster presented at the UNL-STEM retreat, School of Natural Resources, University of Nebraska-Lincoln, NE.

Szostkowski, A., **Bhattacharya, D.** & Roehrig, G. (2016). "I wanted the experts to come and teach me". *How seven secondary science teachers conceptualize culturally responsive science education*. Poster presented at the Council on Anthropology and Education, Minneapolis, MN.

Szostkowski, A., **Bhattacharya, D.** & Roehrig, G. (2016). "I wanted the experts to come and teach me". *How seven secondary science teachers conceptualize culturally responsive science education*. Poster presented at the American Anthropological Association, Minneapolis, MN.

Bhattacharya, D., Karahan, E., Nam, Y., Liu, S., Varma, K. & Roehrig, G. (2015). *Conceptualizing In-service Secondary School Science Teachers' Knowledge Base for teaching global climate change*.

- Poster presented at the annual meeting of the National Association for Research in Science Teaching (NARST), Chicago, IL
- Bhattacharya, D.**, Varma, K. & Roehrig, G. (2014). *Using Metacognitive strategies for understanding Global Climate Change*. Poster presented at the North Central Association of Science Teacher Education, St. Cloud, MN.
- Bhattacharya, D.**, Karahan, E., Nam, Y., Liu, S., Varma, K. & Roehrig, G. (2013). *Conceptualizing In-service Secondary School Science Teachers' Knowledge Base for teaching global climate change*. Poster presented at American Geophysical Union, San Francisco, CA.
- Bhattacharya, D.**, Karahan, E., Varma, K. & Roehrig, G. (2012). *Teachers discovering climate change from a native perspective*. Poster presented at the Graduate Research Day, Department of Curriculum and Instruction, University of Minnesota, MN.
- Bhattacharya, D.**, Karahan, E., Liu, S., Varma, K. & Roehrig, G. (2012). *Teachers discovering climate change from a native perspective*. Poster presented at the Ecological Society of America, Annual Conference, Portland, OR.
- Bhattacharya, D.**, Karahan, E., Liu, S., Varma, K. & Roehrig, G. (2012). *Teachers understanding of Global Climate Change*. Poster presented at the CEHD Research Day, McNamara Alumni Center, University of Minnesota, MN.
- Bhattacharya, D.**, Karahan, E., Liu, S., Varma, K. & Roehrig, G. (2012). *Understanding Global Climate Change in Geological Time Scales*. Poster presented at the CEHD Research Day, McNamara Alumni Center, University of Minnesota, MN.
- Bhattacharya, D.**, Karahan, E., Liu, S., & Roehrig, G. (2012). *Integrating Science and Technology for enhancing student understanding of climate change*. Poster presented at the STEM Education Center Colloquium, McNamara Alumni Center, University of Minnesota, MN.
- Bhattacharya, D.**, Karahan, E., Nam, Y., Wang, J., Liu, S., Varma, K. & Roehrig, G. (2012). *Understanding Global Climate Change in Geological Time Scales*. Poster presented at the Association of Science Teacher Education, Clearwater, FL.
- Bhattacharya, D.**, Karahan, E., Nam, Y., Wang, J., Liu, S., Tierney, B., Varma, K., Roehrig, G.H. (2012). *Conceptualizing in-service secondary school science teachers' knowledge base for climate change content: Sharing Efforts Resulting from NASA Faculty Institutes*. poster presented at the Association of Science Teacher Education, Clearwater, FL.
- Bhattacharya, D.**, Liu, S., & Roehrig, G. (2011). *Teacher professional development for climate change education in Native communities*. Poster presented at the CEHD Research Day, McNamara Alumni Center, University of Minnesota, MN.
- Bhattacharya, D.**, Liu, S., & Roehrig, G. (2011). *Teaching climate change in Native American Communities*. Poster presented at the Graduate Research Day, Department of Curriculum and Instruction, University of Minnesota, MN.
- Bhattacharya, D.**, Liu, S., Roehrig, G., & Varma, K. (2011). *Teachers' understanding of climate change*. Poster presented at the National Center of Earth Dynamics, NSF-NCED Science Retreat, Science Museum of Minnesota, St. Paul, MN.
- Bhattacharya, D.**, Liu, S., Roehrig, G., & Varma, K. (2011). *Enhancing Teachers' understanding of climate change for teaching Native American Students*. Poster presented at the annual meeting of the Institute on environment sustainability symposium, University of Minnesota, MN.
- Bhattacharya, D.**, Liu, S., Roehrig, G., & Varma, K. (2011). *Teachers' understanding of climate change for teaching Native American Students*. Poster presented at the annual meeting of the North Eastern Central Regional Association of Science Teachers, Bemidji, MN.
- Bhattacharya, D.**, Dubinsky, J., Roehrig, G.H. & (2010). *Altered Reality: An activity from BrainU-A teacher professional development program on neuroscience*. Poster presented at the STEM Education Center Colloquium, University of Minnesota, MN.

PROFESSIONAL DEVELOPMENT WORKSHOPS

- Epistemological Understanding of Global Climate Change, (June, 2017)

- Effective and efficient Teaching: Workshop presented for professional development of Teaching Assistants at University of Lincoln, (May 2016)
- Teaching Global Climate Change with EzGCM: Workshop presented at Climate Generation Institute, (June 2016)
- Teaching Global Climate Change: Workshop presented at National Science Teachers Association, (March 2015)
- Integrated STEM curriculum for Informal Science Education: Native Pollinators, University of Minnesota, Extension and Youth Development, St. Paul, MN, March 2015.
- Teaching socio-scientific issues in K-12 classrooms. Workshop organized for Project REACH (July, 2014) participants, Minnesota River Basin, Climate and Human Dynamics as amplifiers of natural Change.
- Promoting Understanding of Global Climate Change: Workshop presented at North-Central Association of Science Teachers in Education, St. Cloud, MN, (October, 2013).
- Floating Islands: A STEM curricular design unit, EngrTEAMS workshop, STEM Education Center, University of Minnesota, Extension and Youth Development, St. Paul, MN, (June 2013).
- Research-based Science Instruction for Climate Change: A Place-based Culturally Responsive Approach Science Teacher Education as a Context for Environmental Literacy Improvement, National Association of Research in Science Teaching- NASA Innovations in Climate Education, (March, 2012).
- Science instruction on complex science issues- Global Climate Change. Workshop presented at the Intermountain Climate Change Education Network, University of Idaho, (June, 2011).
- Bringing Brain Zoo to the classrooms, inquiry-based on Neuroscience. Project BRAIN-U (August, 2010).

OUTREACH PRESENTATIONS & GUEST LECTURES

- Developing a researcher identity, fighting imposter syndrome, Association for Women in Science Group sponsored workshop, University of Nebraska-Lincoln. (August, 2016)
- Understanding Equity and Diversity in Science Education, University of Wisconsin, River Falls, WI, (April, 2015)
- Bringing Brain Zoo to the classrooms, inquiry-based on Neuroscience. Project BRAIN-U (August, 2010).
- Graduate Teaching Assistant Orientation workshop, Minnesota State University Mankato-Mankato, MN. (2007-2009)
- Understanding Equity and Diversity in Science Education, Carlson School of Management, University of Minnesota. (August, 2014)

SERVICE for JOURNALS

Editorial Board Member and reviewer, ISTE (Innovations in Science Teacher Education)	2015
Reviewer, Science Education	2015

SERVICE FOR PROFESSIONAL ORGANIZATIONS

- | | |
|---|---------------|
| ▪ Association of Women in Science, foundation member, UNL chapter | 2016 |
| ▪ National Science Teacher Association | 2012 |
| ▪ Regional Conference Proposal Reviewer | |
| ▪ National Association for Research in Science Teaching | |
| ▪ Conference Proposal Reviewer | 2012- present |
| ▪ Conference Session Presider | 2012-2013 |
| ▪ Association for Science Teacher Education | |
| ▪ Conference Thread Coordinator | 2014-2017 |
| ▪ American Educational Research Association | |
| ▪ Conference Proposal Reviewer | 2012- present |

SERVICE for DEPARTMENT, COLLEGE & UNIVERSITY

- Designing Ag-SEED curriculum, 2016
Department of Youth Development & Agricultural Ed., Purdue University
- Development of gender and equity survey, 2016
Organized and participated in workshops for the Women In Science Affiliate group at UNL

SERVICE for COMMUNITY

- Lincoln Children's Museum, curriculum design workshop 2016
- Member, Teaching and Learning Council, ISD-110, MN 2015-2016

PROFESSIONAL AFFILIATIONS (Past & Present)

- American Educational Research Association 2010-2015
Division K - Teaching and Teacher Education
Environmental Education SIG
- Association for Science Teacher Education 2010-Present
- National Association of Research in Science Teaching 2010-Present
- National Science Teacher Association 2010-Present

COURSES TAUGHT

University of Nebraska-Lincoln

TEAC 315: Teaching Science in The Elementary School (undergraduate).

Minnesota State University, Mankato

BIO 100: Introductory Biology (undergraduate).

BIO 220: Introductory Anatomy (undergraduate).