JULIE REBECCA ROBINSON

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EDUCATION

Ed.D. in Teacher Education and Curriculum Studies **2018**
University of Massachusetts Amherst
Dissertation Title: "Motivation and Gender Dynamics in High School Science: The Effect of Gender Composition on Motivation in Small Group Inquiry and Engineering Tasks"
Committee: Claire Hamilton (Chair), Elizabeth McEneaney, Martina Nieswandt, Nilanjana Dasgupta

Ed.M. in Education **1997**
Smith College, Northampton, MA

B.A. in Spanish Language and Literature **1995**
Smith College, Northampton, MA

PROFESSIONAL EXPERIENCE

University of North Dakota, Grand Forks, ND
College of Education and Human Development, January 2024 – present
Title: Assistant Research Professor
Assistant Research Professor and Director of the UND's Center for Engineering Education Research (CEER). Design and teach undergraduate and graduate courses including: TL 474 *STEM Concepts in the Elementary Classroom,* TL 555 *Issues of Motivation and Equity in STEM Education,* EDL 513 *Leading K – 12 Curriculum and Instruction*, TL 557 *An Introduction to Elementary Engineering*. PI, Co-PI, and senior personnel on three NSF-funded grant projects. Research examines increasing access of rural, Indigenous, and underserved populations in STEM education, as well as models of teacher professional learning to increase self-efficacy with innovative educational approaches. Advise students in their doctoral programs.

Hartford School District, Hartford, VT
Title: Director of Elementary Curriculum, Instruction, and Assessment, July 2022 – December 2023
District administrator managing district and school level continuous improvement, curriculum, assessment, organizational, and MTSS systems. Oversee the development and implementation of Hartford's PreK - 8 curriculum, instructional and assessment programs; support elementary principals in implementing high quality training and instructional practices for all teaching staff; provide and facilitate teacher professional learning opportunities; coordinate district mentoring

program and new teacher orientation; plan and facilitate all Administrative Council meetings; collaborate with Director of Secondary Curriculum, Instruction, and Assessment to create cohesion across schools and grade levels; and prepare and submit the statistical data and financial reports to appropriate local, state, and federal agencies for the elementary schools.

University of North Dakota, Grand Forks, ND
College of Education and Human Development, August 2022 – December 2023
Title: Research Faculty
Part-time research faculty acting as PI, Co-PI, and senior personnel on three NSF-funded grant projects. Research examines increasing access of rural, Indigenous, and underserved populations in STEM education, as well as models of teacher professional learning to increase self-efficacy with innovative educational approaches. Advise students in their doctoral programs.

University of North Dakota, Grand Forks, ND
College of Education and Human Development, August 2017 – August 2022
Title: Assistant Professor
Tenure-track faculty member in the College of Education and Human Development's Teaching Leadership, and Professional Practices Department. Designed and taught undergraduate courses TL 470 *Science in the Elementary School* and TL 474 *STEM Concepts in the Elementary Classroom,* as well as graduate courses TL 518 *Science in the Elementary School*, TL 569 *Action Research*, TL 555 *Issues of Motivation and Equity in STEM Education*, and TL 579 *Inquiry into Professional Practice*. Designed additional courses including TL 404, *Assessment in the Elementary Classroom* and TL 405 and *Data Literacy for Teachers*. Served as Director of the Elementary Education Program area, co-chair of Innovation Task Force, Coordinator for the Masters in Teaching and Leadership STEM specialization area, and member of the Essential Studies and Curriculum and Instruction Committees. Conducted research related to the field of STEM education, including gender dynamics, Indigenous STEM education, and models of teacher professional development, as well as in innovative educational practices in public schools. Supervised student teachers from UND in their classroom field placements. Advised masters and doctoral level students in their programs.

University of Massachusetts, Amherst, MA
Title: Co-instructor, Spring 2016, Fall 2017
Taught professional development workshop titled "Using Design-Based Science Activities in Biology" in graduate-level pre-service teacher education course titled "Advanced Principles and Methods of Teaching Science in the Middle and High School", Department of Teacher Education and Curriculum Studies, College of Education, UMass Amherst.

Science Education Online, University of Massachusetts, Amherst, MA
Title: Program Assistant, 2016 - 2017
An online graduate program for elementary and middle school teachers providing inquiry-based, hands-on courses for teachers to improve their science content knowledge and teaching skills.
Coordinator: Professor Martina Nieswandt, Science Education
Responsibilities included communicating with students in the program regarding their coursework and program of study; managing and maintaining program paperwork and student files; communicating with prospective students about the program; acting as a liaison between

Professor Nieswandt and course instructors; facilitating communication between the College of Education and current students; updating program information

Vermont Academy, Saxtons River, VT
Title: Math Department Chair and Teacher, 2016 – 2017
Responsibilities include supervising and mentoring all teachers in the mathematics department; researching, recommending, and assisting with implementation of effective curricula and teaching practices; mapping curricula across all high school grades and aligning to standards; facilitating department meetings; planning and leading professional development opportunities; teaching Algebra I and Geometry to 9th and 10th graders.

Dummerston School, Dummerston, VT
Title: Academic Support Coach, 2013 – 2016
Responsibilities included providing enrichment and intervention for grades K – 8; professional development for teacher colleagues in math curriculum, pedagogy, and Common Core State Standards; professional development for teacher colleagues in Next Generation Science Standards (NGSS); teaching model lessons; facilitation of weekly literacy professional development meetings; facilitation of monthly data review meetings; coordination and training in Smarter Balanced Assessment Consortium (SBAC) assessments and AIMSweb assessment system; coordination of Virtual High School (VHS) online courses for middle school students

Dummerston School, Dummerston VT
Title: 5th Grade Teacher, 2011 – 2013
Taught all subjects in self-contained 5th grade classroom. Supervised pre-service teachers from the Spark Teacher Education Institute.

Windham Southeast Supervisory Union, Brattleboro, VT
Title: District K – 8 Math Coach, 2010 – 2011
Responsibilities included coaching district teachers in *Investigations in Number, Data, and Space* math curriculum and pedagogy, teaching model lessons, training teachers in use of AIMSweb data management systems, training teachers in use of Kathy Richardson's *Assessing Math Concepts*, facilitating benchmark data meetings in all district schools, evaluating and compiling curriculum materials

Green Street School, Brattleboro, VT
Title: Elementary Teacher, 2001 – 2010
Taught all subjects in self-contained kindergarten, 1st, 2nd, and 5th grade classrooms. Supervised pre-service teachers from Keene State College, Endicott College, Union Institute, and the Upper Valley Teaching Institute

Smith College Campus School, Northampton, MA
Title: Elementary Teacher, 1998 – 2001
Taught all subjects in self-contained, laboratory 2nd grade classroom. Supervised pre-service teachers from Smith College. Participated in Smith College Education Department's research on inquiry science.

Marlboro Elementary School, Marlboro, VT
Title: Elementary Teacher, 1997 - 1998
Taught all subjects in multi-age, 2nd and 3rd grade collaborative, open classroom.

Smith-Northampton Summer School, Northampton, MA
Title: Theater Teacher/Director, Summer 1997
Taught "Foundations of Drama and Theater" course to middle school student as part of summer school program. Directed *Little Shop of Horrors* musical for public performance.

Lake Grove Wendell, Wendell, MA
Title: High School Teacher, 1995 - 1996
Taught all 10th grade curriculum in private boarding school for court-adjudicated boys.

SERVICE TO THE PROFESSION

STEM Night, Valley Middle School. Provided session at Valley's STEM Night for middle school students and families. 2026

Hatton School Field Trip, hosted high school students from Hatton Eielson High School to engage in hands-on STEM activities. 2026.

Robinson, J., Potes, S., Smirnoff, D., Shein, P., Miller, J., & Chlebek, N. (2026, May 5). *Connecting science knowledge through storytelling from around the world, part 2* [Webinar series]. National Association for Research in Science Teaching.

Robinson, J., Malloy, C., Potes, S., Smirnoff, D., Shein, P., Miller, J., Chlebek, N., Chinn, P. & Allen, P. (2026, February 3). *Connecting science knowledge through storytelling from around the world, part 1* [Webinar series]. National Association for Research in Science Teaching.

Facilitator, Mentors Helping Mentors Program, UND, 2025 – 2026.

Invited Facilitator, UND Book Study offerings, 2025 – 2026.

Minto School Field Trip, hosted 62 elementary students from Minto School District to engage in hands-on STEM activities. 2026.

Robinson, J. (2025). Invited panelist, KEEN Summer Lessons Learned. University of North Dakota College of Engineering and Mines.

Editorial Board Member, invited. *CHAPTERS in Education*, Springer Publishing, **current**.

SEA OTRR (See Educators in Action) event at UND's College of Education and Human Development**.** October 2024, 2025; February, 2026.

Robinson, J. Invited presenter, National Institutes of Health (NIH) funded R25 program, Indians into Medicine: Native Educator University Research Opportunity in Neuroscience (INMED: NEURO), UND. (2025).

EdD Program Revision Team, invited member. 2024-25, UND's College of Education and Human Development.

Robinson, J. Invited presenter. North Dakota Space Grant STEM Ambassadors meeting, August, 2025.

Reviewer, *American Society for Engineering Education* (ASEE), 2024-2026.

Invited peer reviewer, *Climate Literacy in Education Journal*. Current.

Invited reviewer, book chapter manuscript, *Hiding in Plain Sight* from **DEI in STEM Higher Education: An Anthology of Practice.** (2025).

Invited reviewer, book manuscript, **Preservice Teachers' Professional Learning Through Online Inquiry Practice**. (2025).

Robinson, J. & Malloy, C. (2025). Place and nature-based storytelling workshop. Hartford, VT.

Robinson, J. (2024 - 2026). Invited presenter. Rock Creek Grant School Inservice on Culturally Relevant Pedagogy and Classroom Management.

Robinson, J. (2025). Invited speaker. *Culturally and community relevant engineering and STEM*. Standing Rock Education Consortium PD Day, Cannon Ball, ND.

Robinson, J. (2025). Invited presenter, Hartford School District Inservice on Place-based, Indigenized educational approaches.

Robinson, J. (2025). NSF DRK-12 Cadre Fellows meeting. Invited panelist.

Robinson, J. (2024 - current). Chair, elected, Indigenous Science Knowledge Research Interest Group, NARST.

Robinson, J. (2023). Invited presenter, Hartford School District Inservice on Diversity, Equity, and Inclusion.

Robinson, J. (2023). NSF DRK-12 Review Panel. Invited panelist.

Robinson, J. (2022). Decolonizing Course Materials: Invited presenter, Teaching Transformation and Development Academy's (TTaDA) Diversity, Equity, and Inclusion faculty series. University of North Dakota, Grand Forks, ND.

Robinson, J. (2021 – 2022) Treasurer, elected, Indigenous Science Knowledge Research Interest Group, NARST.

Robinson, J. (2021). Comprehensive STEM Clinic Project for Basic School Girls from Underserved Ghanian Communities, Invited speaker.

Robinson, J. (2020) Expert Panel, Draw an Engineer and Applications of Math and Science (DEAMS) Instrument and Rubric.

Robinson, J. (2022). Place-based Education: Invited lecture, Ryan Summer's Science Methods course, University of North Dakota, Grand Forks, ND.

Robinson, J. (2019, Feb.) Navigating Science Standards: Invited lecture, Joshua Hunter's Foundations of Environmental Education Course (RLS 362), University of North Dakota, Grand Forks, ND.

Robinson, J. & Summers, R. (2019, June). Establishing a Research-Practice Partnership Between Jaguar Academy and UND Teacher Education: Invited lecture, Pauline Stonehouse's Special Topics in Educational Leadership Course (EDL 579), University of North Dakota, Grands Forks, ND.

Robinson, J. & Summers, R. (2019, April and Nov.). Reading in Science: Invited lecture, Aimee Rogers' Reading in the Content Areas (TL 409), University of North Dakota, Grand Forks, ND.

Robinson, J. (2017 & 2018, Sept.; 2018 & 2019, March). Science in the Early Childhood Classroom: Invited lecture, Michael Gallo's Introduction to Early Childhood Education (TL 310), University of North Dakota, Grand Forks, ND.

Graduate Research Achievement Day judge, UND, **2018 - 2026**.

Judge, Future City Competition, **2021 & 2022**.

Judge, You're Hired! Competition, **2022**.

Mentor, Future City Competition, **2021 & 2022**.

Writer, Elementary Annual Program Review report, UND, **2021**.

Writer, ESPB Elementary Program report, UND, **2020**.

Writer, Elementary Program Assessment report, UND, **2020 & 2021**.

Peer reviewer, *Science and Children,* **current**.

Peer reviewer, *International Journal of Science Education*, **current**.

Peer reviewer, *Journal of Science Teacher Education*, **current**.

Presentation reviewer, New England Doctoral Students' Conference, **2016**.

Peer reviewer, *Journal of Curriculum Studies,* **2014**.

Chair, Leadership Team, Dummerston School, Dummerston, VT, **2014 – 2016.**

SBAC Assessment Coordinator, Dummerston School, Dummerston, VT, **2014 – 2016.**

Chair, Parenting and Learning at Home (PALH) Committee, Green Street School, Brattleboro, VT, **2008 – 2010**.

RESEARCH EXPERIENCE

University of North Dakota, Grand Forks, ND
Principal Investigator, Co-Principal Investigator, Senior Personnel, current
Currently conducting research on culturally relevant engineering and STEM professional development and education in Native-serving elementary and middle schools in North Dakota as part of five separate NSF-funded grants. Responsibilities include serving as project lead and co-principal investigator, design and delivery of teacher professional development, data collection, management, analysis, and dissemination of findings through publications and conference presentations.

University of North Dakota, Grand Forks, ND
Researcher
Conducted research on innovative approaches to education in North Dakota schools, including proficiency-based instruction, customized digital learning environments, and a phenomenon-based approach to STEM for increasing participation of under-represented groups. Responsibilities include serving as co-principal investigator, data collection, management, analysis, and dissemination of findings through publications and conference presentations.

University of Massachusetts, Amherst, MA
Research Assistant, 2014 - 2016
Responsibilities included data collection, data analysis, assisting in curriculum development and teacher professional development, and dissemination of research findings by conference presentations for NSF- funded project titled "Managing Small Groups to Meet Psychological and Social Demands of High School Science" (Project REESE, DRL-125233), PI: Dr. Martina Nieswandt, Co- PI: Dr. Elizabeth H. McEneaney

PUBLICATIONS

Robinson, J. & Raboin, S. (accepted). Weaving Indigenous Teachings into Place-Based Learning: Pathways to Exploring Identity and Interconnectedness in STEAM. In S. Potes

(Ed.), *Place-Based Learning*. North American Native Research and Education Foundation, INC.

Bowman, F., **Robinson, J.,** McGrail, C., Klemetsrud, B., Ozturk, E., Lacina, E., Olateru-Olagbegi, A., & Adetunji, A. (under review). Culturally relevant engineering design: Examining the impact of professional eevelopment for elementary and middle school teachers. *Journal of Pre-College Engineering Education Research*.

Hammack, R., **Robinson, J.**, Gist, J., Lee, M. J., Boz, T. (2026). Understanding how elementary teachers characterize science and engineering within classroom instruction. *Journal of Science Teacher Education.* 1 – 26. *https://doi.org/10.1080/1046560X.2026.2706373*

Hammack, R., **Robinson, J.**, Scherer, S., Gist, J., Lee, M. J., Boz, T., & Cabrera, L. (under review). One teacher's approach to supporting multilingual learners through community-connected culturally relevant engineering design. *Cultural Studies of Science Education.*

Robinson, J., Bowman, F., Adetunji, A., Olateru-Olagbegi, S., & Klemetsrud, B. (2026). *Exploring the design and delivery of community relevant engineering design in elementary and middle school classrooms*. Proceedings from the American Society for Engineering Education (ASEE) Annual Conference & Exposition, Charlotte, NC.

Adetunji, A., Bowman, F., **Robinson, J.,** & Olateru-Olagbegi, S. (2026). *Zone of self-efficacy development (ZSED) model: A framework for teacher growth in community relevant engineering design (CRED) implementation*. Proceedings from the American Society for Engineering Education (ASEE) Annual Conference & Exposition, Charlotte, NC.

Gist, J., Hammack, R., **Robinson, J.,** Lee, M. (2026). *The impacts of on-going professional learning on rural elementary teachers' engineering teaching self-efficacy*. Proceedings from the American Society for Engineering Education (ASEE) Annual Conference & Exposition, Charlotte, NC.

Summers, R., Hammack, R., **Robinson, J.,** Iveland, A., Macias, M., Lee, M. (2026). *On-going investigation of elementary teachers' engineering self-efficacy following their participation in an online professional learning program.* Proceedings from the American Society for Engineering Education (ASEE) Annual Conference & Exposition, Charlotte, NC.

Hammack, R., **Robinson, J.,** Oudghiri, S., Gist, J., Lee, M., & Boz, T. (under review.) One elementary teacher's approach to supporting multilingual learners through community-based engineering design. *Journal of Engineering Education*.

Robinson, J., Smart, K., & Luecke, D. (2025). Sacred Relatives: Learning about interconnectedness within the local watershed. *Climate Literacy Journal, 3*(3).

Hammack, R., **Robinson, J.,** Gist, J., Lee, M., & Boz, T. (under review). Is this a science lesson? Is this an engineering lesson? Understanding how elementary teachers characterize

science and engineering and its connection to practice. *Journal of Science Teacher Education*.

Robinson, J., Olateru-Olagbegi, S., Adetunji, A., Bowman, F., & Klemetsrud, B. (2025, accepted). *Exploring teachers' lived experiences with culturally relevant engineering design: An instrumental multiple case study*. Proceedings from the American Society for Engineering Education (ASEE) Annual Conference & Exposition, Montreal, Canada.

Hammack, R., **Robinson, J.,** Lee, M., Boz, T., Gist, J., & Scherer, S. (2025, accepted). *One teacher's approach to supporting multilingual learners through community-connected culturally relevant engineering design*. Proceedings from the American Society for Engineering Education (ASEE) Annual Conference & Exposition, Montreal, Canada.

Robinson, J. (book under contract). *Global approaches to Indigenous STEM education.* (Vol. #4). Springer.

Robinson, J. Hunter, J., & Mackey, H. (under review). Creating Bridges instead of Borders: Fostering Student Resilience through Integrated, play-based Watershed Curriculum. In S. Potes, J. Robinson, P. Shein, B. Upadhyay (Eds.), *Global approaches to Indigenous STEM education.* Springer.

Robinson, J., Bowman, F., & Klemetsrud, B. (in preparation.) Culturally Relevant Engineering Education in K - 12 Classrooms. In S. Potes, J. Robinson, P. Shein, B. Upadhyay (Eds.), *Global approaches to Indigenous STEM education.* Springer.

Hung, W., Morin, P., & **Robinson, J.** (in preparation.) Cultivating Indigenous Students' STEM Career Interest with Culturally Responsive Project-based Learning (CR-PjBL): The Tate Topa Tribal School Experience. In S. Potes, J. Robinson, P. Shein, B. Upadhyay (Eds.), *Global approaches to Indigenous STEM education.* Springer.

Boz, T., Lee, M., Macias, M., Summers, R. G., Zaman, M., Inouye, M., **Robinson, J.,** Hammack, R. J. (2025). Large-scale online STEM professional learning for rural elementary teachers. *Research in Science Education.*

Hammack, P., **Robinson, J.,** Boz, T., Lee, M. J., Summer, R., Iveland, A., Inouye, M., Macias, M., Amana, M., Galisky, J., Johansen, N., & Ringstaff, C. (2024). *Supporting elementary engineering instruction in rural contexts through online professional learning and modest supports*. Proceedings from the American Society of Engineering Education Annual Conference, Portland, OR.

Bowman, F., Klemetsrud, B., & **Robinson, J.** (2024). *Impact of professional development in culturally relevant engineering design for elementary and middle school teachers*. Proceedings from the American Society of Engineering Education Annual Conference, Portland, OR.

Ozturk, E., Bowman, F. & **Robinson, J**. (2022, April). *Teachers' perceptions on culturally relevant engineering design: Reflections from professional development*. Proceedings of the 2022 American Educational Research Association (AERA), San Diego, CA.

Bowman, F., Klemetsrud, B., **Robinson, J.,** Ozturk, E. (2022, June), *Using Engineering Design Tasks to Create Indigenous Cultural and Community Connections with the Classroom for Elementary and Middle School Students (WIP, Diversity)* Proceedings of the 2022 ASEE Annual Conference & Exposition, Minneapolis, Minnesota.

Robinson, J. & Hammack, R. (2022, April). Engaging preservice teachers in collaborative inquiry projects during remote instruction. *Innovations in Science Teacher Education*, *7*(1).

Mackey, H., Luecke, D., **Robinson, J.,** Biggane, E., and Rino, R. (2021). Partnership through story: promising practices for meaningful research. *Tribal College Journal of American Indian Higher Education*. *33*(2).

Robinson, J. (2022). Making C-E-R "attractive" for elementary teacher candidates. *Science and Children*, *59*(6).

Gonzales, A.C., Purington, S., **Robinson, J.,** & Nieswandt, M. (2019). Teacher interactions and effects on groups' triple problem solving space. *International Journal of Science Education, 41*(13)*,* 744 – 763.

Robinson, J., Nieswandt, M., & McEneaney, E. (2018). Motivation and gender dynamics in high school engineering groups. Proceedings of the 2018 American Society for Engineering Education (ASEE) CoNECD conference, Crystal City, VA.

Affolter, R., **Robinson, J.,** Lord, B., & Nieswandt, M. (September, 2017). Iteration is at the heart of science and engineering. *The Science Teacher*, *84*(6), 50 – 55.

CONFERENCE PRESENTATIONS

Robinson, J., Owens, D., Miller, J., Hammack, R., Melton, J., Mawyer, K., Bowers, H., Chun, Y., & Shao-Yu, L. (submitted). Integrating the A in STEAM: Centering the arts and ancestral knowledge to Indigenize and enhance science and engineering instruction. National Association for Research in Science Teaching (NARST), Boston, MA.

Lee, M., **Robinson, J.,** Hammack, R., Cabrera, L., Gist, J., & Wang, R. (submitted). *A rubric as a roadmap: Elementary teachers' use of a community-relevant engineering design tool to shape classroom engineering lessons*. Paper proposal in preparation for the 2027 National Association for Research in Science Teaching (NARST) Annual International Conference, Boston, MA.

Perry, A., Hammack, R., **Robinson, J.,** Scherer, S., Jayanth, N., & Zaman, M. (submitted). *The allure of culture-first PL for experienced, rural K-12 teachers* [conference paper]. AERA 2027, Toronto, Canada.

Gist, J., **Robinson, J.,** Lee, M., & Hammack, R. (2026). *Connecting engineering design lessons to community: A workshop for elementary teachers*. National Association for Research in Science Teaching (NARST), Indianapolis, IN.

Azure, A., Klemetsrud, B., & **Robinson, J.** (2026). *Embedding community and culture in your classroom through connection*. Workshop presented at the North Dakota Indian Education Summit, Bismarck, ND.

Robinson, J. & Brecklin, C. (2026, May). *Expanding pathways for rural students into engineering*. Poster to be presented at the Established Program to Stimulate Competitive Research (EPSCoR) Annual Summit. New Orleans, LA.

McGrail, C., **Robinson, J.,** & Brecklin, C. (2026). *Exploring preservice science teachers' self-efficacy for teaching engineering design through engagement with culturally relevant engineering design pedagogy*. Presented at the University of North Dakota's College of Education and Human Development Research Conference, Grand Forks, ND.

Lee, M., Gist, J., Inouye, M., **Robinson, J.** & Summers, R. (2026). *What is quality science and Engineering Instruction?: Elementary teachers' conceptions after two years of professional learning*. Presented at the University of North Dakota's College of Education and Human Development Research Conference, Grand Forks, ND.

Raboin, S. **& Robinson, J.** (2026). *Weaving Indigenous teachings into place-based learning: Pathways to exploring identity and interconnectedness across STEAM.* Presented at the University of North Dakota's College of Education and Human Development Research Conference, Grand Forks, ND.

Robinson, J., Bowman, F., Adetunji, A., Olateru-Olagbegi, S., & Klemetsrud, B. (2026). *Exploring the design and delivery of community relevant engineering design in elementary and middle school classrooms*. Presentation accepted for the American Society for Engineering Education (ASEE) Annual Conference & Exposition, Charlotte, NC.

Adetunji, A., Bowman, F., **Robinson, J.,** & Olateru-Olagbegi, S. (2026). *Zone of self-efficacy development (ZSED) model: A framework for teacher growth in community relevant engineering design (CRED) implementation*. Poster accepted for the American Society for Engineering Education (ASEE) Annual Conference & Exposition, Charlotte, NC.

Gist, J., **Robinson, J.,** Hammack, R., Lee, M. (2026). *The impacts of on-going professional learning on rural elementary teachers' engineering teaching self-efficacy*. Presentation accepted for the American Society for Engineering Education (ASEE) Annual Conference & Exposition, Charlotte, NC.

Summers, R., Hammack, R., **Robinson, J.,** Iveland, A., Macias, M., Lee, M. (2026). *On-going investigation of elementary teachers' engineering self-efficacy following their participation in an online professional learning program.* Poster accepted for the American Society for Engineering Education (ASEE) Annual Conference & Exposition, Charlotte, NC.

Robinson, J., Macias, M., & Iveland, A. (2026). Making engineering meaningful: CRED framework lessons for rural elementary teachers. Poster to be presented at the National Science Teaching Association (NSTA) National Conference. Anaheim, CA.

Robinson, J., Hunter, J., Raboin, S., Chinn, P., Potes, S., Medina, V., Trevino, L., Krakowski, D., Cavero, D., Erickson, S., Shein, P., & Upadhyay, B. (2026). *Bridging cultures and knowledge: Fostering cross-cultural connections in Indigenized STEM education and research*. Symposium accepted for presentation at the National Association for Research in Science Teaching (NARST) Annual International Conference, Seattle, WA.

Robinson, J., Tung, L., Shein, P., Sukinarhimi, P., Jaber, L., Khurshid, A., Chlebek, N., Smirnoff, D., Miller, J., Voss, S., Melton, J., Hanuscin, D., Kepler, C., & Ballard, H. (2026). *Community Partnerships within Science Education Research: Building Trust and Reciprocity.* Symposium accepted for presentation at the National Association for Research in Science Teaching (NARST) Annual International Conference, Seattle, WA.

Cabrera, L., Gist, J., **Robinson, J.,** Lee, M., Hammack, R., & Boz, T. (2026). *Supporting student motivation through community relevant elementary engineering lessons*. Presentation accepted for the American Education Research Association (AERA) Annual Meeting. Los Angeles, CA.

Robinson, J. & Brecklin, C. (2025). *Center for Engineering Education Research: Advancing STEM education and partnerships in North Dakota.* Presentation at the Annual ND EPSCoR State Conference, Fargo, ND.

Summer, R., **Robinson, J.,** & Lee, M. (2025). *DRK12 Investigating the impacts of online teacher professional learning on science and engineering instruction in rural elementary schools*. Poster presented at the Annual ND EPSCoR State Conference, Fargo, ND.

Malloy, C., **Robinson, J.,** Shein, P., Sukinarhimi, P., Chinn, P., Potes, S., & Allen, P. (2025). *Connecting to science knowledge through Indigenous storytelling from around the world*. Presentation accepted at the World Indigenous Peoples' Conference on Education (WIPCE), Auckland, NZ.

Robinson, J. & Zacher, S. (2025). *Community relevant engineering design*. Workshop presented at the North Dakota Indian Education Summit, Bismarck, ND.

Raboin, S., **Robinson, J.,** Hunter, J., Smart, K., Schlenker, J., Bowman, F., Luecke, D., Malloy, C., & Gourneau, B. (2025). *Indigenizing STEM Education through Culturally Relevant*

Place-Based Interdisciplinary Curriculum. Presented at the University of North Dakota's College of Education and Human Development Research Conference, Grand Forks, ND.

Summer, R., **Robinson, J.,** Lee, M., Iveland, A., Hammack, R., & Inouye, M. (2025). *Impacts on rural elementary teachers after a year-long online professional learning program*. Poster presented at the University of North Dakota's College of Education and Human Development Research Conference, Grand Forks, ND.

Robinson, J., Olateru-Olagbegi, S., Adetunji, A., Bowman, F., & Klemetsrud, B. (2025, accepted). *Exploring teachers' lived experiences with culturally relevant engineering design: An instrumental multiple case study*. Presentation accepted at the American Society for Engineering Education (ASEE) Annual Conference & Exposition, Montreal, Canada.

Hammack, R., **Robinson, J.,** Lee, M., Boz, T., Gist, J., & Scherer, S. (2025, accepted). *One teacher's approach to supporting multilingual learners through community-connected culturally relevant engineering design*. Presentation accepted at the American Society for Engineering Education (ASEE) Annual Conference & Exposition, Montreal, Canada.

Summers, R., Hammack, R., **Robinson, J.,** Inouye., M., Lee, M.J., Boz., T., Macias, M., & Iveland, A. (2025, June). *Examining Changes in Elementary Teachers' Engineering Self-Efficacy Across a Year-Long Professional Learning Program*. Paper presented at the American Society for Engineering Education (ASEE) Annual Conference & Exposition, Montreal, Canada.

Robinson, J., Hunter, J., Smart, K., Gourneau, B., Luecke, D., Schlenker, J., Bowman, F., & Raboin, S. (2025). *Using integrated, place-based watershed curriculum to increase teachers' culturally relevant STEM self-efficacy*. Poster presented at the Community for Advancing Discovery Research in Education (CADRE) DRK-12 Principal Investigator's Annual Meeting, Arlington, VA.

Hammack, R., **Robinson, J.,** Lee, M., Boz, T., Cabrera, L., Gist, J., Iveland, A., Inouye, M., Macias, M., & Summers, R. (2025, June). *Engineering Learning Community: Teachers' Perceptions of Engineering Teaching & Its Implementation in Their Teaching*. Poster presented at the Community for Advancing Discovery Research in Education (CADRE) DRK-12 Principal Investigator's Annual Meeting, Arlington, VA.

Summers, R., Ringstaff, C., Iveland, A., Hammack, R., Inouye, M., **Robinson, J.,** Macias, M., Boz, T., & Lee, M. (2025, June). *Investigating how ongoing professional learning with modest supports impacts elementary teachers' science and engineering practice*. Poster presented at the Community for Advancing Discovery Research in Education (CADRE) DRK-12 Principal Investigator's Annual Meeting, Arlington, VA.

Robinson, J., Gardner-Vandy, K., Cicek, J., Hammack, R., Allen, P., Gumbo, M., Luecke, D., & Puniwai, N. (2025). *Teachers' approaches to Indigenizing STEM education through instructional practice and curriculum*. Symposium accepted at the National Association

for Research in Science Teaching (NARST) Annual International Conference, National Harbor, MD.

Robinson, J., Hunter, J., Owens, D., Khurshid, A., Voss, S., Chinn, P., Chlebek, N., Miller, J., Acupina, F., Hammack, R., & Upadhyay, B. (2025). *Exploring how embedding Indigenous Knowledge and practices into STEM education promotes health and well-being*. Symposium accepted at the National Association for Research in Science Teaching (NARST) Annual International Conference, National Harbor, MD.

Robinson, J., Crabtree, L., McCurdy, R., Hung, W., Morin, P., Shein, P., Kahawaii, B., Potes, S., Erickson, S., Upadhyay, B., & Smirnoff, D. (2025). *Reframing science and engineering: Teachers' strategies for Indigenizing STEM education.* Symposium accepted at the National Association for Research in Science Teaching (NARST) Annual International Conference, National Harbor, MD.

Hammack, R., **Robinson, J.,** Gist, J. R., Lee, M., & Boz, T. (2025). Is this a Science Lesson? Is this an Engineering Lesson?: Understanding how Elementary Teachers Characterize Science and Engineering and its Connection to Practice. Paper accepted for presentation at the annual conference of the Association for Science Teacher Education (ASTE) in Long Beach, CA.

Inouye, M., Lee, M., Zaman, M., Macias, M., Gist, J. R., Boz, T., **Robinson, J.,** Hammack, R., Iveland, A., & Ringstaff, C. (2025). *Sustaining Teachers' Learning to Teach NGSS-aligned Science and Engineering: Teachers' Experiences with Modest Supports*. Paper accepted for presentation at the annual conference of the American Educational Research Association (AERA) in Denver, CO.

Summers, R., Hammack, R., **Robinson, J.,** Inouye., M., Lee, M., Boz., T., Macias, M., & Iveland, A. (2025). *Examining Changes in Elementary Teachers' Engineering Self-Efficacy Across a Year-Long Professional Learning Program*. Paper accepted for presentation at the American Society for Engineering Education (ASEE) Annual Conference & Exposition, Montreal, Canada.

Hammack, R., **Robinson, J.,** Boz, T., Lee, M. J., Summer, R., Iveland, A., Inouye, M., Macias, M., Amana, M., Galisky, J., Johansen, N., & Ringstaff, C. (2024). *Supporting elementary engineering instruction in rural contexts through online professional learning and modest supports*. Poster presented at the American Society of Engineering Education Annual Conference, Portland, OR.

Summers, R., Iveland, A., Hammack, R., Inouye, M., **Robinson, J.,** Macias, M., Boz, T., & Ringstaff, C. (2024, January). *Offering Rural Elementary Teachers Modest Supports to Sustain Professional Development Outcomes in Science and Engineering*. Paper presented at the annual conference of the Association for Science Teacher Education in New Orleans, LA.

Bowman, F., Klemetsrud, B., & **Robinson, J.** (2024). *Impact of professional development in culturally relevant engineering design for elementary and middle school teachers*. Session presented at the American Society of Engineering Education Annual Conference, Portland, OR.

Robinson, J. (2024, July). *Project CuRRENT: Using a Place-Based Approach to Indigenize STEM Education*. Session presented at the 2024 North Dakota Indian Education Summit, Bismarck, ND.

Inouye, M., Hammack, R., **Robinson, J.,** Boz, T., Lee, M., Summers, R., Iveland, A. (2024, March). *The Rural Community Walk: A strategy to deepen understanding of your unique teaching context to support authentic, relevant instruction.* Presented at the University of Wyoming, College of Education Summit, Laramie, Wyoming.

Galisky, J., Macias, M., Iveland, A., Inouye, M., Hammack, R., **Robinson, J.,** Ringstaff, C., & Summers, R. (2024, accepted). *Science professional learning that offers opportunities for growth in engineering self-efficacy for rural school elementary teachers*. Paper submitted for presentation at the NARST Annual International Conference, Denver, CO.

Robinson, J., Mohl, E., Zandvliet, D., Chinn, P., Owens, D., & Upadhyay, B. (2024, March). *Embedding Indigenous Science Knowledge and Ways of Knowing to Promote Biocultural Diversity and Sustainability*. Symposium presented at the National Association for Research in Science Teaching (NARST) Annual Conference, Denver, CO.

Robinson, J., Hammack, R., Shein, P., Ahanonye, A., Upadhyay, B., Potes, S., & Crabtree, L. (2024, March). *Indigenizing STEM within Teacher Education and Professional Development*. Symposium presented at the National Association for Research in Science Teaching (NARST) Annual Conference, Denver, CO.

Robinson, J., Bowman, F. & Klemetsrud, B. (2023, August). *Using a culturally relevant engineering design framework with a water filtration task*. Workshop presented at the Nurturing STEM in the PreK – 12 Classroom Conference, Grand Forks, ND.

Nelson-Barber, S., Zandvliet, D., **Robinson, J.,** Hunter, J., Upadhyay, B., Chinn, P., Shein, P., Sukinarhimi, P., & Kuo, T. (2023, April). *Exploring the potential of locally- and globally-valued knowledges.* Symposium presented at the National Association for Research in Science Teaching (NARST) Annual Conference, Chicago, IL.

Robinson, J., Bowman, F. & Klemetsrud, B. (2022, October). *Using a culturally relevant engineering design (CRED) framework to implement a water filtration task*. Session presented at the School Science and Mathematics (SSMA) Convention, Missoula, MT.

Robinson, J., Bowman, F., Klemetsrud, B., Lacina, E., & Ozturk, E. (2022, May). *Teachers' Culturally Relevant Engineering Self-efficacy.* STEM for All Video Showcase.

Robinson, J. (2022, May). *Using a culturally relevant engineering design framework to support teacher self-efficacy.* Paper presented at the 2022 Virtual Mini Symposium on

Indigeneity, Sustainability, and Resilience Research, University of Hokkaido and University of Hawaii Manoa.

Robinson, J. & Hammack, R. (2022, January). *Pre-Service Teachers' Engagement in Collaborative Inquiry Projects During Remote Instruction*. Paper presented at the 2022 Association for Science Teacher Education (ASTE) International Conference, Greenville, SC.

Upadhyay, B., Chinn, P., Zandvliet, D., Morrison, D., & **Robinson, J.** (2022, April). *Indigenous knowledges for sustainable science education and research*. Pre-conference workshop held at the National Association for Research in Science Teaching (NARST) Annual Conference, Vancouver, BC, Canada.

Robinson, J. (2022, March). *Indigenizing the Processes of Science and Engineering – Increasing Inclusivity with Implementation of the SEP's*. Symposium presented at the National Association for Research in Science Teaching (NARST) Annual Conference, Vancouver, BC, Canada.

Robinson, J., Bowman, F., & Klemestrud, B. (2022, April). *Using community connections to create Indigenized, culturally relevant engineering design tasks for elementary and middle school students.* Paper presented in the Indigenous Science Knowledge Research Interest Group. Administrative session at the National Association for Research in Science Teaching (NARST) Annual Conference, Vancouver, BC, Canada.

Ozturk, E., Bowman, F., & **Robinson, J.** (2022, April). *Teachers' Perceptions on Culturally Relevant Engineering Design: Reflections from Professional Development*. Paper presented at the American Educational Research Association (AERA) Annual Meeting, San Diego, CA.

Robinson, J., Hunter, J., & Mackey, H. J. (2022, April). *Bridges instead of borders: Fostering student resilience through integrated, play-based watershed curriculum*. Paper presented at the 2022 American Educational Research Association (AERA), Indigenous People of the Americas SIG.

Mackey, H. J., Luecke, D., **Robinson, J.,** Biggane, E., & Rino, R. (2022, April). *Partnership through story: Promising practices for meaningful research*. Paper presented at the 2022 American Educational Research Association (AERA), Indigenous People of the Americas SIG.

Smart, K. & **Robinson, J.** (2021, July). *Action Research for Teachers: A Novel Approach to Scaffolding & Supporting Teachers in Learning the Research Process*. Paper presented at the National Social Science Association (NSAA) Virtual Conference.

Robinson, J. (2020, May). *Exploring student motivation in a digital, personalized learning environment.* Paper presented at the virtual International Conference on Motivation (Sig 16).

Bowman, F., **Robinson, J.,** Klemetsrud, B., and Lacina, E. (2021, May). *Exploring Culturally Relevant Engineering Education Design.* STEM for All Video Showcase.

Robinson, J., Hunter, J., Bladow, J., Schlenker, J. and Dodson, J. (2021, April). *Collaborative Learning Gardens: Establishing Community Connections between UND's College of Education and Human Development and Valley Middle School.* Poster presented at the virtual Pre-Place-Based Education Symposium Poster Session.

Smart, K., Gourneau, B., & **Robinson, J.** (2021, March). *A Year into the Pandemic: Survey of Education Students' Well-Being.* Paper presented at the National Social Science Conference. Virtual.

Gourneau, B., Smart, K., & **Robinson, J.** (2021, March). *Face to Face and Distance Learning for First Year Teachers.* Paper presented at the National Social Science Conference. Virtual.

Hammack, R. & **Robinson, J.** (2020, December). *Engaging Pre-Service Teachers in Collaborative Inquiry Projects During Remote Instruction*. Paper presented at the NW-ASTE unConference. Virtual.

Robinson, J. (2020, September). *Exploring student motivation in a digital, personalized learning environment*. Poster to be presented at the International Conference on Motivation (Sig 8 meets Sig 16), Dresden, Germany. (cancelled due to COVID-19)

Robinson, J., Hunter, J., Gourneau, B., & Bahnson, A. (2021, April). *Developing Indigenous students' STEM identities through a phenomenon-based approach: integrating a STREAM curriculum in the elementary classroom*. Paper presented in the Indigenous Science Knowledge Research Interest Group. Administrative session at the National Association for Research in Science Teaching (NARST) Annual Conference, Orlando, FL.

Robinson, J. & Young, T. (2020, March). *Future City Series*. Workshop series presented at the North Dakota Science Teachers' Association (NDSTA) STEM Conference, West Fargo, ND. (Cancelled due to COVID-19)

Robinson, J., Nieswandt, M., & McEneaney, E. (2019, April). *The effect of gender composition on motivation in small high school biology groups*. Paper presented at the National Association for Research in Science Teaching (NARST) Annual Conference, Baltimore, MD.

Robinson, J. (2018, August). *Small group design: the effect of gender composition on student motivation in STEM*. Poster presented at the International Conference on Motivation (Sig 8 ICM), Aarhus, Denmark.

Robinson, J., Nieswandt, M., & McEneaney, E. (2018, April). *Motivation and gender dynamics in high school engineering groups*. Paper presented at the American Society for Engineering Education (ASEE) CoNECD Conference, Crystal City, VA.

Robinson, J. (2018, March). *There's no crying over spilled oil*. Workshop presented at the NDCTM (North Dakota Council of Teachers of Mathematics)/NDSTA (North Dakota Science Teachers Association) STEAM Conference, Valley City, ND.

Guo, M. & **Robinson, J.** (2017, June). *Engineering design in a high school classroom: an improved oil spill activity as a model for design-based science*. Workshop presented at the American Society for Engineering Education (ASEE) Annual Conference & Exposition, Columbus, OH.

Robinson, J. (2017, April). *The Effect of Gender Composition on Small Groups in High School Science*. Paper presented at the National Association for Research in Science Teaching Annual Conference (NARST), San Antonio, TX.

Guo, M. & **Robinson, J.** (2017, March). *Oil spill clean-up: A model for design-based learning and teaching*. Workshop presented at the Integrated STEM Education Conference (ISEC), Princeton, NJ.

Robinson, J. & Guo, M. (2016, April). *Looking through different lenses into small groups in science.* Invited lecture at The College of Education's Fortnightly Lecture Series, University of Massachusetts, Amherst, MA.

Robinson, J. (2016, March). *Gender dynamics in high school science*. Poster presented at Annual New England Doctoral Students Conference (NEDSC), Rivier University, Nashua, NH.

Robinson, J. (2016, March). *Gender dynamics in high school science*. Poster presented at Doctoral Students' Gallery Walk, University of Massachusetts, Amherst, MA.

Robinson, J. (2013, October). *Adolescent girls' engagement with science class: a review of the literature*. Paper presented at the Northeastern Educational Research Association Conference (NERA), Rocky Hill, CT.

Robinson, J. (2012, October). *The experience of middle school girls in their science classroom*. Poster presented at the Northeastern Educational Research Association Conference (NERA), Rocky Hill, CT.

Robinson, J. (2009, May). *Student resilience and attention*. Paper presented at the first annual Teachers as Researchers Conference, University of New Hampshire, Manchester, NH.

GRANTS, SCHOLARSHIPS, AND FUNDED PROJECTS

NSF IUSE Grant, Rural Health Minds: Vertically Integrated Health Innovation. Alvarez, E. (Principal Investigator), **Robinson, J.,** Brunmaier, L., Ewert, D. (Co-Principal Investigators). $750,000. **Under review.**

NSF STEM K-12 Grant, Rural AI-focused Informal STEM+C Experiences for Career Interest Development (RAISE). Hung, W. (Principal Investigator), Robinson, J., Boz, T. (Co-Principal Investigators). $802,243. **Under review.**

U.S. Public Diplomacy Freedom 250 Grants Program, AUT–UND Entrepreneurial Mindset and Innovation Based Learning Exchange Program. Cater, J. (Principal Investigator), **Robinson, J.,** Alvarez, E. (Co-Principal Investigators). $100,000. **Under review.**

USDA AFRI Grant, Purrfessor-AI: A Conversational Artificial Intelligence Learning Platform. Lu, L. (Principal Investigator), **Robinson, J.,** Ranganathan, P., Johnson, N., Sicong, Shao (Co-Principal Investigators). **$2,000,000.** Under review.

ND EPSCoR Research Seed Award. A Proof-of-Concept Study of an AI-Powered Teacher Support Tool for Rural Elementary Engineering Instruction. Boz, T. (Principal Investigator), **Robinson, J.,** Kashani, H., Wang, D. (Co-Principal Investigators). $60,000. **Not funded, preparing resubmission.**

NSF RFE Grant, Collaborative Research: Engaging Future Engineers in Creating Place-based Artificial Intelligence Solutions for Locally Relevant Engineering Problems (EDP+AI). Boz, T. (Principal Investigator), **Robinson, J.,** Mahmood, T., Kim, C. (Co-Principal Investigators), Grande, I. (Senior Personnel). $859,990. **Not funded, preparing resubmission.**

EPA Environmental Education Grant Program. Ersan, M. (Principal Investigator), **Robinson, J.,** Dorafshan, S., Ersan, G. (Co-Principal Investigators). $250,000. **Under review.**

NSF FEC Grant, Autonomous Technologies for Civil Infrastructure Engineering. Dorafshan, S. (Principal Investigator), **Robinson, J.**, Gaweesh, S., Snyder, P., Lei, T., Hu, J., Vacek, J., Flynn, D. (Co-Principal Investigators). $2,800,000. **Not funded.**

William T. Grant Foundation Reducing Inequalities Grant, Engaging Teachers in Community Relevant Engineering Education, **Robinson. J.** (Principal Investigator), Brecklin, C. (Post-doctoral scholar). $49,947. **Not funded.**

Bush Foundation Community Innovation Grant, Community Driven Design: Centering Culture within the Four Winds Community School through Engineering. Bowman, F. (Principal Investigator), **Robinson, J.,** Klemetsrud, B., McGrail, C. & Lacina, E. (Co-Principal Investigators). $750,000. **Not funded, preparing resubmission.**

NSF RIEF Grant, Structural Engineer Identity in the Age of Automation. Dorafshan, S. (Principal Investigator), Robinson, J. (Co-Principal Investigator), Brecklin, C. (Post-doctoral scholar). $199,998. **Not funded**.

NSF RFE Grant, CREaTE: Community Relevant Engineering and Teacher Education Research. Nafziger, B. (Principal Investigator), Moldavan, A., Brady, A., Robinson, J., McGrail, C. (Co-Principal Investigators), Brecklin, C. (Post-doctoral scholar). $478,687. **Not funded, preparing resubmission**.

NSF S-STEM Grant, Question-based Undergraduate Experiential Science Training. Simmons, R. (Principal Investigator), Kubatova, A., Pedersen, D. Lancu, L., & Mattingly, S. (Co-Principal Investigators), **Robinson, J.** (External Evaluator). $1,999,766. **Funded 2025.** Award: 2424922.

NSF EPSCoR Research Fellows Grant, Expanding Pathways for Rural Students into Engineering. **J. Robinson** (Principal Investigator). $299,997. **Funded 2025.** Award: 2531729.

NSF Translation and Diffusion Grant, Collaborative Research: Understanding the Impact of Professional Learning Programs on Teacher Decision Making and Practice. Hammack, R. (Principal Investigator at Purdue University), **Robinson, J.** (Principal Investigator at the University of North Dakota), Scherer, S., & Perry, A. (Co-Principal Investigators). $750,000. **Funded 2025**. Award: 2530414.

UND Connect Grant, University of North Dakota. $5000. **Funded 2024.**

CEHD RFD Mini-Grant, University of North Dakota. $3000. **Funded 2024.**

NSF AISL Grant, Collaborative Research: Cultivating STEM Career Interest in Middle School Students Using AI-based Imagery Recognition with Unmanned Aircraft Systems (AIIRUAS). Hung, W. (Principal Investigator), **Robinson, J.,** Zha, S., Gong, N. (Co-Principal Investigators). $997,259. **Not funded.**

NSF EPSCoR Research Fellows Grant, Expanding Pathways for Native Students into Engineering. **J. Robinson** (Principal Investigator). $292,093. **Not funded.**

NSF DRK12, Exploring collaborative professional development with grades 3 - 8 teachers to promote self-efficacy in culturally relevant engineering teaching. Bowman, F. (Principal Investigator), **Robinson, J.,** Klemetsrud, B., & Lacina, E. (Co-Principal Investigators). $2,771,599. **Not funded, preparing resubmission, November 2024**.

NSF ITEST Grant, Cultivating STEM Career Interest in ND Middle School Students with UAS. W. Hung (Principal Investigator), N. McGaughey, B. Klemetsrud, & T. Stokke (Co-Principal Investigators), **J. Robinson** (consultant). $1,500,000. **Not funded.**

National Science Foundation, Discovery Research, Late stage design and development K-12. *Investigating how intensive and modest supports effect rural, elementary teachers' science and engineering practice.* R. Summers (Principal Investigator), R. Hammack, A.

Iveland, M. Inouye, C. Ringstaff (co-Principal Investigators), **J. Robinson** (Senior Personnel). $2.9 million. **Funded 2022**. Award: 2201249.

NSF DRK-12 Grant, Using integrated, place-based watershed curriculum to increase teachers' self-efficacy with culturally relevant STEM. **Robinson, J.** (Principal Investigator), Hunter, J., Smart, K., & Gourneau, B. (Co-Principal Investigators), Bowman, F. & Schlenker, J. (Senior Personnel). $499,000. **Funded 2022**. Award: 2201196.

Rural Schools Collaborative Catalyst Grant, A Strengths-Approach to Rural Collaborations: Identifying and collaborating in the recruitment and retention of teachers in diverse rural settings. Hunter, C. (Principal Investigator), D'Amico, D., Gourneau, B., Summers, R., **Robinson, J.**, Hunter, J., Johnson, C., & Carol, S. (Co-Principal Investigators). $25,000. **Funded 2021.**

National Science Foundation, North Dakota Experimental Program to Stimulate Competitive Research (ND-EPSCoR) STEM Education, Research, and Outreach SEED Award. $15,000. *Engaging Pre-college Students in Working with Authentic Biomedical Data to Develop Understandings of Experimental Design and Clinical Research.* R. Summers, A. Kelliher, **J. Robinson,** T. Walch, M. Basson, D. Warne, & R. Navarro. $15,000. **Funded 2021.**

U.S. Department of Education Grant, Indian Professional Development Program. De Silva, R. (Principal Investigator), Hunter, J. (Co-Principal Investigator), & **Robinson, J.** (Co-Principal Investigator). $1,440,000. **Funded 2021.** Award: S299B210021.

NSF DRK-12 Grant, Exploring changes in elementary teachers' engineering design self-efficacy and practice through ongoing, collaborative professional development, $449,868, Bowman, F. (Principal Investigator), **Robinson, J.,** Klemetsrud, B., & Lacina, E. (Co-Principal Investigators). **Funded 2020.** NSF Award: 2010269.

NSF EPSCoR Track II – FEC, Machine Learning for Complex Biomass Pyrolysis Networks, $5,766,762, Kubatova, A. (Principal Investigator), Navarro, R., Smirnova, A., & Kozliak, J. (Co-Principal Investigators), Summers, R., **Robinson, J.**, & Loh, Y. (Senior Personnel). **Not funded.**

University of North Dakota Post-Doctoral Seed Funding Program, $140,000, **Robinson, J.** (Principal Investigator) & Bowman, F. (Co-Principal Investigator). **Funded 2020.**

North Dakota Career and Technical Education Department. Future City in North Dakota. $50,000, Young, T. (Principal Investigator), Summers, R., **Robinson, J.**, Gilmore, M., Ji, Y., Haeselin, D., & Pearson, D. (Science Educators). **Funded 2019.**

EHD X + Y Faculty Salary Initiative, University of North Dakota. **Funded 2019 - 2021.**

EHD Summer Grant-Writing Award, University of North Dakota. $2500. **Funded 2019.**

EHD RFD Travel and Equipment Grant, University of North Dakota. **Funded 2019.**

NSF ATM Grant, Carbonaceous tracers in thermal desorption and pyrolytic organic particulate matter, $581,975, Kubatova, A. (Principal Investigator), Kozliak, E., Simmons, R., **Robinson, J.,** Bowman, F., & Darby, B. (Co-Principal Investigators). **Not funded.**

STEAM Energy!, North Dakota Department of Public Instruction. ND-DPI, Mathematics and Science Partnership Grant Program, STEAM Energy!, $50,000; Young, T. (Principal Investigator), Summers, R., **Robinson, J.**, Gilmore, M., Haeselin, D., DeMuth, D. (Science Educators). **Funded 2018.**

Open Educational Resources (OER) Grant, University of North Dakota. $3000. **Funded 2018.**

North Dakota Space Grant Consortium Summer Faculty Fellowship, University of North Dakota. $4500. **Funded 2018, 2020.**

EHD RFD Travel and Equipment Grant, University of North Dakota. **Funded 2018.**

EHD RFD Mini-Grant, University of North Dakota. $3000. **Funded 2018.**

Dissertation Writing Retreat, University of Massachusetts Amherst. **Accepted 2017.**

Dissertation Writing Retreat, University of Massachusetts Amherst. **Accepted 2017.**

Dissertation Research Grant, University of Massachusetts Amherst. $500. **Funded 2016.**

Smith College Graduate Teaching Fellowship. **Awarded 1996 - 1997.**

PROFESSIONAL EDUCATION AND CONSULTING ACTIVITIES

Designed and led 3-day STREAM ED workshop for K-12 educators, Bismarck, ND, July **2025**.

Led 3-day STEM workshop for K – 8 teachers from Rock Creek Grant School, Standing Rock Nation, Bullhead, SD, **2021**.

Led engineering and math modules as part of UND's STEAM Energy Workshop for K – 12 teachers, Bismarck, ND, **2018**.

Designed and led 8-session training for new teachers at Vermont Academy entitled "Mentor Mondays", which examined issues of pedagogy, instruction, assessment, and differentiation, **2016 – 2017**.

Led 14-session training for teachers at Dummerston School in Common Core State Standards in Mathematics, **2013 – 2015**.

Led study group for K – 4 teachers on Writing for Understanding at Dummerston School, **2014 – 2015**.

Designed and led workshop for WSESU district teachers in Kathy Richardson' *Assessing Math Concepts* assessment system, **2011**.

Taught workshop on inquiry science in the elementary grades for teachers at Green Street School, **2004**.

Co-taught inquiry science summer course for elementary teachers in Windham Southeast Supervisory Union, **2003**.

DISSERTATION COMMITTEES

Holtz, Kamryn, Committee member.

Guerra, Valerie, Committee member.

Richardson, Sally, Committee member.

Boswell, JaNae, Committee member.

Carnazzo, Joseph, Committee member.

Ringsby, Erik, Committee member.

Roness, Troy, Committee chair.

Alimboyugen, Leinora, Committee chair.

Zaman, Maria, Committee chair.

Bakke, Jeffrey, Committee member.

Knutson, Karina, Committee member.

Dunnigan, Alysse, Committee member.

Raboin, Sydney, Committee member.

Poitra, Cheryl. Committee chair.

Larson, Caleb. Committee chair.

Wittkopp, Ann, Committee chair.

Hanson, Karissa, Committee chair.

Ripley, Holly, Committee co-chair.

Frank, Melinda, Committee co-chair.

Worges, Orlando, Committee chair.

Vazquez, Talia, Committee chair.

Shuley, Cortney, Committee co-chair.

Miller, Briana, Committee chair.

Ljevaja, Igor, Committee chair.

Keute-Djonne, Caitlin, Committee chair.

Ries, Katy, Committee chair.

Adetunji, Adesola, Committee co-chair.

Zacher, Sarah, Committee chair.

Zuiderhof, Jackie, Committee member.

Kaloustian, Samantha, Committee member.

Bachmeier, Rachel, Committee member.

Stout, Sharon, Committee co-chair.

Smalley, Ashley, Committee member.

Morgan, Ricky, Committee member.

Heyne, Beth, Committee chair.

Clancy, Kate, Committee chair.

Lawal, Adekunle, Committee chair.

Bakke, Rebecca, Committee chair.

Carter, Palestrina, Committee chair.

Bladow, Jenny, Committee member.

Peterson, Samantha, Committee member.

Ullom, Renee. Committee member.

Nafziger, Bailey. Committee chair.

Arnold, Patricia. Committee chair.

Berosik, M. Committee member.

HONORS AND AWARDS

Robinson, J. (2026). Nominated for UND's Outstanding Graduate Faculty Mentor Award.

Robinson, J. & Hunter, J. (2025). Red River Basin Partnership Award. International Water Institute and Red River Basin River Watch Program.

2024 American Society for Engineering Education Pre-College Engineering Education Best Paper Award & 2024 Best Diversity Paper Award