The Mallinson Institute for Science Education
Fall 2025 Newsletter

Advancing Global Scientific Literacy

FROM THE DIRECTOR

It is apt that I write this during one of the coldest and snowiest Decembers I remember in my time in Kalamazoo. For MISE, 2025 was a season of very big change. Charles Henderson, our long time Director AND our Administrative Assistant Dawn Marquardt both left WMU. By August of this year we had a brand new Director, a brand new administrative assistant (Erin), a brand new assistant professor (Emily Driessen), and for the first time our on-line students outnumbered our in-person students.

With change comes challenge. There are new responsibilities to take on, like figuring out how to write a newsletter! We need to find our space as a now, truly, global community of practice, and we need to learn how to grow in this hybrid world.

I am proud to be the next Director of MISE and I am ready to take on the challenges that have come with all of this change. But, I am also extraordinarily lucky to have such an amazing group of humans surrounding me. This newsletter is all about those folks. The students (past and present), the faculty, the staff, the accomplishments, the struggles, the innovations, and the one thing we all share: being passionate about teaching and learning science.

My hope is that everyone who receives this will take some time to read about the humans of MISE and their many adventures in science education. Each person featured here is leading us toward our ultimate goals: Advancing Global Scientific Literacy (So ALL may learn). Please have a safe and restful break. I look forward to seeing what change and challenge comes to us in 2026!

Dr. Brandy Pleasants, Director

WELCOME TO MISE!

Dr. Emily Driessen: Assistant Professor

Hey Everyone! My name is Dr. Emily Driessen. I recently moved to Kalamazoo, MI from Minneapolis, Minnesota to being my position at Western Michigan University as an Assistant Professor in both the Mallinson Institute for Science Education and the Department of Biological Sciences. My position involves both research and teaching. My research lab focuses on developing and improving undergraduate biology student and community scientific literacy, science communication, and critical thinking skills. These skills are critical for biology majors and non-majors alike, bolstering both the use of evidence in citizens' daily decisions and the scientific enterprise. My teaching focuses on using evidence-based teaching practices to teach Principles of Biology for undergraduate students and Experimental Design and Analysis for undergraduate and graduate students. Aside from work, I enjoy playing pickleball, running marathons, spending time with my dog, Lou, and shoveling snow. That last bit is a bit of sarcasm. If we have yet to meet, feel free to email introduce yourself or stop by my office.

Erin Baker: Administrative Assistant

Hi, I'm Erin Baker and I've been with Western for 17 years working as an administrative assistant. I grew up in Paw Paw and have two grown children and two grandchildren. I enjoy the beach, being outdoors, live music and recently took up bike riding which I am hoping to continue to craft as the new year approaches.

I volunteer with Centrica Care and have worked with a few families while they are in Hospice. It's a very rewarding and fulfilling experience.

Fun fact-The Kalamazoo Gazette did an article about my grandfather and mother in a 3-part series during WWII-my mother was born while my grandfather was stationed overseas, and they highlighted children born during the war. My mother was the first child born in Kalamazoo during the start of the war, so the article was about her birth. They did a follow up when he returned home when my mother was 2 years old and then another follow up 45 years later.

REVISITING FRIENDS AND ALUMNI

Dr. Charles Henderson: Former MISE Director

After more than two decades at WMU and the Mallinson Institute, I recently began a new chapter at North Carolina State University, where I've joined the Department of Physics and the Integrative Sciences Initiative. My work here continues many of the themes that shaped my time at WMU: supporting instructional change, strengthening interdisciplinary STEM education, and helping build structures that enable faculty and departments to improve teaching in sustainable ways.

At NC State, I'm collaborating with colleagues across colleges on several new research projects focused on interdisciplinary STEM education and systemic change in higher education. These efforts include developing research-practice partnerships with departments, studying how faculty navigate cross-disciplinary teaching and curriculum design, and contributing to national conversations about scaling and sustaining educational innovation. I'm also enjoying the opportunity to mentor graduate students and postdocs in science education and to help shape a growing community of scholars who are thinking deeply about how to prepare students for the complex, interdisciplinary challenges they will face.

Although I am excited about this new position, the transition has made me reflect on how formative the Mallinson Institute has been in my professional life. I am deeply grateful for the collaborations, and support that I experienced there and the many excellent students I worked with over the years. The work we did together continues to influence my perspective and practice every day. I hope to stay connected and find opportunities for future collaborations through our shared commitments to improving STEM education.

Thank you to the Mallinson community for the many years of partnership. I look forward to staying in touch and hearing about the Institute's continued accomplishments.

Dr. Kathy Quardokus Fisher ('14)

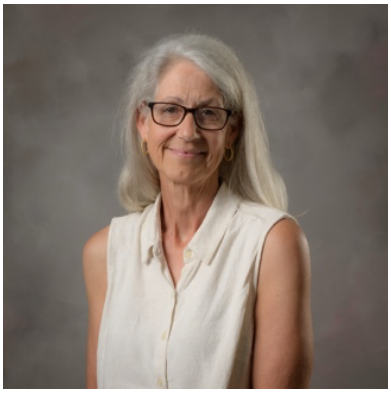
Greetings MISE community!

I am a 2014 PhD graduate of MISE. I am an associate teaching professor and program director for curricular transformation in the Kaneb Center for Teaching Excellence within Notre Dame Learning at the University of Notre Dame. My science background is in atmospheric science, and I taught high school mathematics and physics before joining MISE. I chose MISE because I wanted to investigate why instructors choose to teach the way that they do and why the ideal classroom differs from reality.
After finishing my MS degree in atmospheric science at Purdue University, it was difficult to find a PhD program in atmospheric science education, which made MISE's focus across all the sciences a great fit for me!

Since my dissertation, my research has continued to have a primary focus on STEM faculty professional development and organizational change. In 2023, I transitioned from an associate professor at Florida International University to my current role.

At Notre Dame, I facilitate our Foundational Course Transformation Academy (FCTA). This role is exciting because I have the opportunity to use my expertise to lead change at Notre Dame and to research its outcomes. The FCTA consists of a three-year learning community that engages departmental faculty in redesigning a large-enrollment introductory course. This process includes gathering data from stakeholders and peer-reviewed research, aligning faculty goals in a shared vision, and researching and evaluating the transformed course. Right now, I am working with two teams of faculty and education experts to transform Engineering Physics I, Engineering Physics II, and Calculus I.

Dr. Peggy McNeal ('17): MISE Alumni Award Winner



Dr. Peggy McNeal is an Associate Professor in the Department of Physics, Astronomy, and Geoscience at Towson University in Towson, MD. Her research bridges cognitive science, education, and geoscience focusing on characterizing and supporting the spatial visualization skills students need to effectively learn about fluid earth processes.

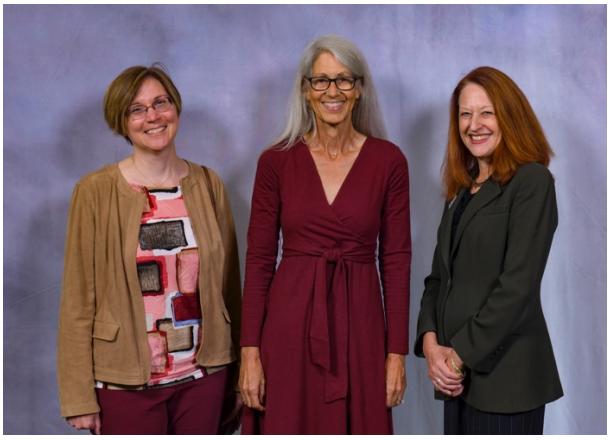
In the seven years that she has been with Towson, she has already earned tenure, published 14 peer-reviewed papers (including four from her dissertation), given 18 conference presentations and four invited talks, and received over $600,000 in external grant funding, the majority from highly competitive NSF programs.

Dr. McNeal regularly teaches undergraduate courses in oceanography, physical science, and earth science. Drawing on her 14 years as a middle school science teacher, she also teaches courses in earth and space science for middle school teachers. She has supervised several undergraduate student researchers and a MS student thesis.

McNeal is active in building capacity for high quality geoscience education research at the national level. In 2025, she became the Editor for Research for the *Journal of Geoscience Education*, for which she has served as a reviewer and Associate Editor since 2018. She received an Outstanding Reviewer award from the *Journal* in 2019. She served as Secretary of the Geoscience Education Division of the National Association for Geoscience Teachers (NAGT) from 2020-2023 and as Secretary/Treasurer of the Teacher Education Division of NAGT from 2017-2020. She currently is Co-PI on a multi-institution grant that builds collaborations to enhance education research in the atmospheric science community. She is regularly asked to serve on advisory boards, lead workshops, and dedicate her time and expertise to national organizations that promote geoscience education.

McNeal received her PhD from the Mallinson Institute for Science Education in 2017. While a doctoral student at WMU, she had the rare distinction of receiving not one, but two All-University Graduate College awards – both the Research and Creative Scholar award and the Graduate Teaching award. In 2017, she was the inaugural recipient of the Totten Geoscience Education Research Award from NAGT for outstanding research by a graduate student.

McNeal earned a BS in Oceanography from the United States Naval Academy in 1986, where she was among one of the first cohorts of women admitted to the institution. After eight years of active service in the US Navy as a Line Officer, she earned her teaching credentials and taught middle school science and math in San Diego County for 14 years. She has an MS in Geoscience from Mississippi State University and served for two years as a PolarTREC teacher responsible for public outreach and developing curricula based on arctic research.



Dr. Peggy McNeal (Middle), with her Dissertation Chair, Dr. Heather Petcovic (left) and Dean of the College of Arts and sciences Dr. Carla Koretsky (right).

MISE STUDENT SPOTLIGHTS

Fredrick Magi: 2nd year MISE student

Hi, I'm Fredrick Magi, and I am excited to share a bit of my journey with you all.

I am a Nigerian graduate with a Bachelor's degree in Physics Education and a Master's Degree in Solid Earth Physics. I also have a PGCE(QTS) in Physics. I am presently a second-year Ph.D. student in the Geoscience Education Program at Western Michigan University, Mallinson Institute for Science Education (MISE), having joined the MISE family in Fall 2024.

Growing up in a tidal river community, I watched the river flow one way in the morning and reverse in the evening; a daily mystery that sparked my early curiosity about Earth systems. The explanations my teachers offered never fully satisfied me, and that lingering question stayed with me for years. It ultimately inspired me to pursue geoscience education so I could truly understand the phenomenon I now study with clarity and purpose.

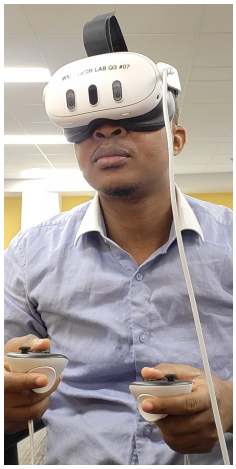
I have over 15 years of teaching experience across Nigeria and the United Kingdom, primarily at the primary and secondary levels- (K–12) equivalent in the United States. My commitment to teaching has shaped much of my journey and ultimately took me to the UK to complete my Post Graduate Certificate in Education (PGCE).

After years of teaching, I knew I wanted to deepen my impact by merging my passion for teaching with my foundational curiosity in geoscience. That's why I chose MISE. I was looking for a program that focused not just on scientific knowledge, but on the art and science of teaching it. MISE felt like the perfect place to explore these innovative educational strategies and bridge that gap.

Of course, the journey here has had its challenges and rewards. Transitioning to a Ph.D. program in a new country with my family is a significant undertaking, requiring adaptation both academically and culturally. But the reward has been immense. I've found a supportive and inspiring community at MISE (when I say community, I mean every single faculty and fellow graduate student) and have had the opportunity to work on research that feels incredibly meaningful to me.

My current research focuses on reimagining how geoscience is taught, particularly through the use of emerging technologies such as Immersive Virtual Reality (IVR). This work is deeply collaborative. Alongside my advisor, Dr. Heather Petcovic, and the GEOS 1000 coordinators, Aylin Yildirim and Justin Honer, I am investigating how IVR can enhance students' interest, motivation, and learning outcomes in geoscience education. Our VR lab specifically centers on improving students' understanding of topographic maps, a foundational yet often spatially challenging concept for many learners.

A crucial part of this work involved developing a series of scaffolding materials to support students' engagement with the VR experience. This was made possible through close collaboration with Alex Teal and the VR department in the university library, Aylin Yildirim and Justin Honer whose technical expertise and support were essential in getting the project off the ground. With their help, we designed a VR lab that allows non-geology majors to virtually explore the Etna Crater in Italy, enabling them to interact with the landscape in an immersive 3D environment using the GEAVR immersive environment. To guide students through this experience, we created an instructional video to familiarize them with the VR controllers, functions, and navigation within the virtual environment, along with a carefully structured worksheet that outlines the step-by-step procedures they would follow while completing the activity in pairs. We also provided printed 3D models and corresponding 2D topographic maps to further support their spatial understanding. (Continued next page)



Here: Fred using his VR equipment to test his new material.

Next Page: Fred using experiential learning to teach his students about topography.

The implementation of the class took three days with a total of 31 non-geology majors exposed to the engaging learning environment. I have recently completed the first round of data collection, and the initial feedback from students has been highly encouraging—representing a meaningful milestone for my research. One student even told Dr. Heather, *"This is so cool—it makes me want to be a geologist!"*—a clear sign that the IVR experience genuinely increased students' interest in geoscience.

I am preparing for another round of implementation in the spring semester. Once I refine the methods and collect more data, I plan to write the work for publication and present it as my early research requirement (ERR).

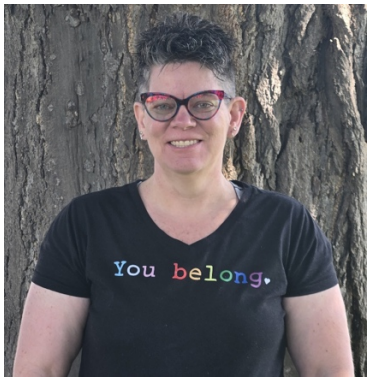
This project represents a major step toward achieving my academic goal of completing my degree. Once I finish, I hope to build on this experience by developing additional immersive virtual reality instructional modules designed to teach NGSS and ESS aligned topics across the United States. My long-term vision is to collaborate with VR software companies to create learning experiences that spark curiosity and empower students, making science feel less like a difficult subject and more like an exciting adventure. In many ways, this work is also personal: it allows me to create the kind of engaging science education I once wished for as a boy growing up by the river in my village.

Susana Acheampomaah: 3rd year MISE student

The inherent **visuospatial demands** of traditional science pedagogy render learning environments significantly challenging for individuals with visual impairments (VI). As a scholar and an individual with lived experience of this challenge, I can substantiate that these accessibility gaps impede full engagement and mastery of science concepts. **Data indicates a significant disparity** in educational outcomes and career pathways, with individuals with VI being **underrepresented** in the Science, Technology, Engineering, and Mathematics (**STEM**) pipeline. Consequently, my commitment is focused on the systematic **remediation of structural barriers** within the science classroom to foster an inclusive and equitable learning experience.

My research agenda as a MISE doctoral student is dedicated to the comprehensive study and development of accessible science teaching methodologies in the life sciences tailored specifically for the visually impaired learner. My early research centers on an exploratory analysis of the K-12 science learning experiences of college students with visual impairment. This investigation seeks to elucidate the antecedent pedagogical variables and environmental factors that have contributed to either persistence and success or attrition and underperformance within STEM programs. Concurrently, I am synthesizing findings for a forthcoming conference presentation. This paper focuses on **identifying and analyzing effective instructional strategies** and **curricular design principles** that optimize the teaching and learning of **postsecondary biology** for visually impaired students.

Jess Marquardt: 2nd year MISE student



Hi All-I am Jess Marquardt; my pronouns are she/they and I am in my second year here at MISE in the Biology DBER doctoral program. I'm an online student attending from Harrisonburg, Virginia. My "day job" is as a Senior Lecturer at James Madison University. I teach human and animal physiology lecture and lab courses in the biology department.

I am greatly enjoying my time here at MISE and am learning a ton. Along with classes, I have had the opportunity to regularly participate in the Disability and Neurodivergence (DANCE) in STEM Education Working Group as well as the Kowalske and Driessen research groups. My research interests include equity, student belonging, and student identity in the STEM classroom, especially for queer and neurodiverse students. I am invested in all students feeling safe and that they belong in science spaces. Science classrooms should strengthen students' science identity and afford them the best opportunity to be successful there.

I am excited to be currently working on a research project with Dr. Tara Lepore, focusing on STEM instructor perceptions of in-class group work and neurodiversity. I am also working on a narrative literature review and talk, "Exploring the state of intersectional queer and neurodivergent identities in the biosciences." I will present this as part of the symposium, Disabled and Neurodivergent Perception, Community, and Identity in the Biosciences, at the Society of Integrative & Comparative Biology (SICB) national conference in January. Let the adventure continue!

MISE AWARD WINNERS

Department Level Teaching Award Winners (2025)

Tongrian Daspan (SCI 2070, SCI 2080, SCI 3090)

Nina Morris (SCI 1600, SCI 3090)

Department Level Research Award Winner (2025)

Olumarotimi Popoola

All University Teaching Award Nominee (2025)

Tongrian Daspan (SCI 2070, SCI 2080, SCI 3090)

All University Research Award Nominee (2025)

Aaron Wenger

CONGRATULATIONS GRADUATES!

On behalf of everyone at the Mallinson Institute for Science Education, we congratulate our **THREE** Doctoral Graduates for the 2025 year! We are so proud to call them Doctor!

Dr. Queen Roach defended her dissertation on June 30, 2025. Her work was titled: Developing and testing an instrument to diagnose and measure change in conceptual understanding of ENSO among undergraduates. Her committee included Dr. Bill Cobern, Dr. Heather Petcovic, and Dr. Lei Meng.

Dr. Oluwarotimi Popoola defended his dissertation on September 29, 2025. His work was titled: Development of the hydrogeology concept inventory and exploration of its embedded spatial thinking components. His committee included Dr. Heather Petcovic, Dr. Peggy McNeal, and Dr. Betty Adams.

Dr. (Jeffrey) Buddy Stark defended his dissertation on October 13, 2025. His work was titled: Environmental beliefs among Evangelical leadership. His committee included Dr. Betty Adams, Dr. Bill Cobern, and Dr. Stephen Case.

Kristen Foley: MISE PhD student AND Faculty at Kellogg Community College

Hello and happy autumn! My name is Kristen Foley, and I've been a student at MISE since 2018. I've earned an MS in geosciences from WMU and am working to complete my PhD in geoscience education through MISE. My BS in earth and space exploration is from Arizona State University.

My graduate research has been focused on virtual fieldwork in the geosciences. I've explored what options are available and how instructors find and use them in their courses. I stared this research in 2018, before COVID-19 forced everyone to use virtual options for fieldwork, so I sort of became very popular in my field in a very short period of time because of this. So many people asked my opinion of various virtual options or asked where they could find something that meets a need. With the rapid development of new virtual fieldwork options in 2020 and beyond, I feel like that was one of the few good things to come from that year.

I started out as a concurrently enrolled graduate student with the geosciences department, from which I earned my MS in 2022. Being concurrently enrolled allowed me to take all of my coursework for my PhD through MISE at the same time as I was taking coursework for my MS. This proved to be *very* beneficial to me, as I ended up having some pretty big changes in my life shortly after my 2022 graduation.

I casually applied and got a teaching job in Summer of 2023 and I took a step back from my research that Fall when my son joined our family. He has special needs, so my step back into formal research has been a slow one. My daughter just joined us this Fall and I'm looking forward to getting back into regular research to finish up this degree!

My teaching position is at Kellogg Community College in Battle Creek, where I'm the instructor of natural sciences. My predecessor retired after more than 50 years in the role, so I had my work cut out for me when I arrived. I teach physical geography/geology and environmental science courses, and I'm in charge of the content for our astronomy course as well. In my time so far, I've been keeping busy with bringing the material into the current era and making these courses more student-centered by closely monitoring how students are assessed to see if they're meeting the learning outcomes for each course.

I've also been working to design new courses, expanding our current offerings and listening to student feedback on what the "hot topics" are that they'd like to learn more about. Currently, there are five new courses working their way through the approvals pipeline, which will allow students to get a more robust degree in their time at KCC. As with all my courses, I hope students leave at the end of the semester being more scientifically literate and confident in their ability to analyze real vs manufactured (or false/misleading) data and information.

My job also offers me the opportunity to mentor students of my own and work 1:1 with them to explore their interests. In my two years at KCC, I've mentored one honors student on their honors project and two students through an independent study course. While the honors project is still underway, my student has been exploring ways to bring science to our public community spaces through art! My independent study duo spent their semester studying the pond on campus and documenting the flora and fauna and collected data about the water quality. This project was worked up into a poster that was presented by one of the students at the Geological Society of America regional conference in March of 2025. The conference was an awesome opportunity for my student to learn more about careers and future schooling options, and they loved listening to the presentations and talking to other students about their research.

My education at MISE has opened so many doors for me, and I am able to be a more confident educator because of it. After completing my coursework, I'm able to discern between assessment types and know which is the most appropriate for the situation. I'm able to create clear assignments, anticipating potential problem areas and questions I may get. I can write a syllabus and analyze assessment data to ensure my students are meeting the outcomes for the course. My assignments have a variety of Bloom's verbs and are at the appropriate level for my students (with a healthy challenge to expand their thoughts!). All of these things and more are what I credit to my time at MISE, for which I'm grateful! Having the confidence to do these things has allowed me to spend less time worrying about how to do them and opened up more time for me to spend connecting to my students and meeting them where they are.

Since I'm at a community college, my role as an instructor gives me the opportunity to teach so many different students in different capacities. My students range from those dual enrolled with their high school, to traditional students who have just finished high school, to those looking for a career change after 30+ years on the job, and those enjoying learning something new in their retirement from the workforce. I also teach informally through summer camps for 10-12 year olds and various community events throughout the year. I team up with our

campus' student life office to put on events for earth science week in the fall and Earth Day & Arbor Day celebrations in the spring. Students will also catch me flipping pancakes at our end-of-semester "stress busters" event for students to grab some free pancakes to fuel their brains and bodies as they study for final exams.

I'm grateful for the many opportunities MISE has given me and I'm thankful for the friends and teachers-turned-colleagues (and friends) I've gained along the way. While I haven't been very active in the MISE scene lately, my MISE friends still reach out to check in and celebrate life along the way. The friendships I've made here are just as valuable as the education, something I wasn't expecting to be as true as it is! Thank you to all the people who have mentored me along my journey and to the friends I've made, I treasure you all more than you know!

Have a peaceful holiday season and may the new year bring happiness, good health, and a renewed excitement for learning. 💛

SCIENCE AND MATH IMPROVEMENT PROGRAM (SAMPI)

Dr. Cody Williams, SAMPI Director

SAMPI is a program evaluation center, focused on grant-funded project that require outside evaluation or would benefit from expertise in research design and data analysis. For over 30 years SAMPI has been a staple of life at the Mallinson Institute. Under the current guidance of Dr. Cody Williams, himself a MISE alum, it continues to create opportunities for research, faculty, and students.

Dr. Williams is supported by a staff of knowledgeable and experienced colleagues. Dr. Ben Oakley is a researcher with particular interest in K-12 math teaching. Dr. Aaron Wenger is a post-doctoral student who has done extensive work with meta-analyses and big data analysis. Michelle Munetsi is an expert in grant budgeting and coordination. Ninah Miller has been with SAMPI for the major duration of the program, and has been invaluable in statistical analysis. In addition, depending on funding, SAMPI contributes to the mission of MISE by employing graduate students as research assistants, giving them valuable experience and skills.

This year we are working on building broader communities across not just WMU, but with present and past colleagues and alumni across the world. MISE prides itself on having graduated some extremely research-centered science educators and we encourage you to consider SAMPI for designing proposed programs or evaluating programs that already exist.

Though SAMPI's main focus is on science and math, they are qualified to work on any kind of educational program. They are familiar with teaching and learning from pre-k to college, understand the science and math school standards, and have experience working with teachers, faculty, and administration.

If you are planning a project, or have one that could use additional expertise, consider contacting Dr. Williams at cody.t.williams@wmich.edu or visit the SAMPI Website at https://wmich.edu/sampi

FACULTY FEATURE

David (Dave) Rudge was hired by the Department of Science Studies in the fall of 1999. He has had a joint appointment since the summer of 2001. His primary appointment is in the Department of Biological Sciences; his secondary appointment is in the Mallinson Institute for Science Education (MISE). Dave completed his M.S. (Biological Sciences) and his Ph.D. (History & Philosophy of Science) at the University of Pittsburgh. He was promoted to full professor in 2018. Dave is a true renaissance man, having published peer reviewed journal articles as a biologist, a philosopher and as a historian. With regard to the latter, he is perhaps best known for his work on H.B.D. Kettlewell's classic investigations of the phenomenon of industrial melanism in the peppered moth, *Biston betularia*, in the early 1950s.

Shortly after his appointment at WMU, Dave shifted the focus of his research to science education. He served as PI on a large ($900K) NSF Science Technology, Engineering and Mathematics Teacher Preparation (STEMTP) Grant with co-PIs Bill Cobern, Robert Poel, Paul Vellom and Charles Pearson, entitled "Enlist, Equip and Empower (E^3): An Integrated Program for Middle School Science Teachers." It was a collaboration with Grand Valley State University (Dr. Julie Henderleiter, who was the original PI on the project) and involved substantial outreach to two area school districts (KPS, Vicksburg).

Dave and his MISE graduate students investigate how stories (narratives) from the history of science can promote the learning of and about science. Eric M. Howe, his first doctoral student, studied the impact of a six lesson long capstone unit based on the history of research on sickle-cell anemia affected preservice teachers' perceptions of multiple issues associated with the nature of science. Dr. Howe's research was particularly memorable in that Anthony Allison, a pioneer on sickle-cell research, was a member of his dissertation committee and gave a talk as part of our department's seminar series. Dr. Janice M. Fulford, Dave's second doctoral student, pursued her research with reference to the history of H.B.D. Kettlewell's investigations of industrial melanism. Dr. Cody T. Williams, his third doctoral student, pursued his doctoral studies with reference to Gregor Mendel's investigations of inheritance in pea plants and is currently Director of the Science and Mathematics Program Improvement (SAMPI) here at WMU. Dr. Dai "Pearl" Peng, another of Dave's students, studied the impact of a story developed with reference to the discovery of the structure of DNA. Her project was particularly innovative in that it shared the story twice: first from the perspective of James Watson and Francis Crick in a manner that highlighted the role of creativity and imagination in science, and second from the perspective of Rosalind Franklin, which drew attention to cultural and gender issues.

Yet another recent student of Dave's, Dr. Allison Witucki pursued her dissertation work this past year on the impact of a course based undergraduate research experience (CURE). This research was funded on our colleague Wendy Beane's NSF Career Grant. Dr. Beane served as a member of the dissertation committee. Two peer reviewed science education papers have already been published as a result of this collaboration!

Dave regularly teaches *BIOS 1120 Principles of Biology*, a large lecture course taken by health science majors and others wanting to satisfy a general education requirement as part of WMU's Essential Studies program. He first offered the course using a "flipped classroom" approach: students were asked to watch a lecture, read a chapter, take a quiz and do homework all outside of class, with in-person class meetings used for questions and group work. As a result of the covid pandemic, he revised the course for online asynchronous delivery.

Over the course of his career Dave has received multiple teaching awards, including the department's *Dr. Darrell R. Latva Biological Sciences Teaching Excellence Award* (2017) and the *College of Arts and Sciences Faculty Teaching Award* (2018). In 2022 he was named *College Science Teacher of the Year* by the Michigan Science Teacher Association. In 2023 he was named a recipient of WMU's *Faculty Distinguished Teaching Award*. And this past year he was inducted into his high school alma mater's Hall of Distinction!

OBITUARIES

The Mallinson Institute for Science Education lost two very important people in 2025 and we want to acknowledge how foundational both were to our program. They will both be very missed.

Jackie Mallinson was the matriarch of the Mallinson Institute and a fierce fighter for science education, and was heavily involved in the Michigan branch of the National Science Teachers Association (NSTA). She and her husband George gave generously to our programs and their memorial fund continues to provide yearly tuition and stipend assistance. Jackie passed on January 15, 2025 at 98.

Bob Poel was the second person to graduate from Science Education Doctoral Program, in 1970. He later became the Director of the Center for Science Education, the precursor to the current Mallinson Institute. Bob passed after a year-long battle with ALS on August 4, 2025.

OUR PROGRAMS

Master of Arts in Science Education: This program is designed for K-12 science teachers who wish to expand their teaching skills and broaden their science content knowledge. It is available entirely online and available to students anywhere in the world.

Doctor of Philosophy in Science Education: This program is designed for those with a science or science education background who wish to pursue careers as college or university science teachers, science education researchers, science teacher educators, curriculum specialists, high school science department chairs, or professionals in government agencies or school districts. The program can be completed either in person or through synchronous on-line participation.

Concurrent Program (Master's + PhD): This special program is designed for those wishing to become college- or university-level science teachers or researchers in science education. The concurrent program allows students to be simultaneously admitted to a science master's degree program in Biology, Chemistry, Physical Geography, Geology, or Physics, and the Mallinson doctorate in science education.

College Science Teaching Certificate: This new 3-course certificate is intended to enhance the skills of individuals who wish to improve as instructors of science in a college setting. The program is open to current graduate students in science departments and to college-level instructors and faculty of science elsewhere.

DONATE TO THE MISE COMMUNITY

In 2025, the MISE students, faculty, and staff have done incredible things. They've participated in around 30 conference presentations, submitted and published over a dozen papers, and attended numerous professional development opportunities. We've gotten grants worth thousands of dollars and because of previous support from the MISE community we have been able to pay for:

Conference fees and travel costs for students to participate in presentations.

Costs associated with research, including everything from gift cards for participants, to printing costs.

Assistantships for students to finish up their research requirements and complete their programs of study.

Your support makes learning possible. Making a donation to the Mallinson Institute for Science Education ensures you are empowering the next generation of smart leaders, creative thinkers and global citizens. Every gift has a direct impact on our students, empowering them with the tools and resources needed to become leaders and givers of tomorrow. Your support make possible the extra margin of excellence in the Mallinson Institute for Science Education at Western Michigan University, helping to support a graduate student, their research, and professional development.

If you would like to make a donation, please make your check out to Western Michigan University, Mallinson Institute, and send it to:

WMU Gift Processing
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