

## NNCI Diversity Subcommittee 2021 Member Profiles

**Jacob Jones** is a first-generation college student from a rural community and empathizes with students and families navigating the complexities of college and post-secondary education opportunities. This perspective underpins his commitment to the diversity and outreach initiatives of the RTNN. As a child in 4-H, he would've loved RTNN's program that brings portable scanning electron microscopes to rural classrooms, libraries, and 4-H clubs. His work in Sydney, Australia and at the University of Florida (UF), a state with a large Hispanic and Latinx population, influenced his understanding of diversity issues and opportunities. As a faculty member (UF, NC State), he has won several awards to diversify his research group and STEM fields. For example, through the NSF's Alliances for Graduate Education and the Professoriate (AGEP) Graduate Research Supplement (GRS) opportunity, he has supported and mentored a diverse group of PhD students (50% women, 25% underrepresented minority groups in STEM). Outside of his group, Jones led a ten-year program that enabled over 50 students to pursue research projects in foreign laboratories with close to 60% of program participants from underrepresented groups in the program's final years. To promote the contributions of women to ferroelectrics research and development, Jones recently led a Special Issue in the IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control journal. The Special Issue, published in February 2021, is the first in a series that specifically highlights work from underrepresented groups. Jones is presently a Distinguished Professor of Materials Science and Engineering and Director of the RTNN site.

**Gabriel Montaña** is a native New Mexican Chicano Scientist born and raised in Gallup, NM and has spent his academic and professional careers in the southwest. Gabriel is as devoted to outreach initiatives as he is to his research, in particular to enhancing diversity in the Science Technology, Engineering and Mathematics (STEM) workforce. Among his outreach efforts, Gabriel has served as a Board Member and as President of the Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS), as a member of numerous committees and Task Forces including the Hispanic Association of Colleges and Universities (HACU) STEM task force the Minority Affairs Committee of the Biophysical Society and also has served as the Chief Diversity Fellow for Northern Arizona University since 2019 leading the establishment of the first-ever NAU Diversity Strategic plan. He has dedicated his career to demonstrating to aspiring scientists the possibility of being an effective, high-impact research scientist while making a difference through outreach initiatives that can help current and future generations of scientists.

**Charles (Charley) Lowry** grew up in rural Appalachia and is a first-generation college graduate. Charley has over twenty years of experience working in higher education and his former roles include working as director of international student services, assistant director of alumni relations/continuing medical education and Title IX investigator. Charley currently serves the NanoEarth program at Virginia Tech as the Coordinator of Diversity and Outreach. This includes leadership of NanoEarth's Multicultural and Underserved Nanoscience Initiative (MUNI). MUNI provides access to and training opportunities on state-of-the-art nanoscience-relevant instrumentation, as well as nano-synthesis and processing laboratories, for underrepresented professionals and students of all academic levels, from K-12, to community college students, to students in four-year programs and even graduate school.

**Sherine Obare** received a Bachelor of Science degree in Chemistry from West Virginia State University (a historically black university), obtained a Doctor of Philosophy degree in Chemistry from the University of South Carolina and thereafter was a Camille and Henry Dreyfus Postdoctoral fellow at The Johns Hopkins University. As a professor, she has mentored over 100 graduate, undergraduate and high school students, half of whom have come from underrepresented minority groups. She also has made significant contributions to the secondary education program of the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers. Obare is currently the Dean of the Joint School

of Nanoscience and Nanoengineering, an innovative collaboration between North Carolina Agricultural and Technical State University (a historically black college and university) and the University of North Carolina at Greensboro (a minority serving institution). She is also a Full Professor of Nanoscience at UNC Greensboro.

**Bill Wilson**, a first-generation college student, developed a love of science and math as an intercity kid in the 60's and 70's mesmerized by the wonders of the space program. Bill received a BS degree in Chemistry from Saint Joseph's University in Philadelphia and a Ph.D. in Physical Chemistry from Stanford University as a Bell Laboratories, Cooperative Research Fellow. Wilson joined the research staff at AT&T Bell Laboratories in the Fall of 1987. Bill was a member of technical staff in the Physical Chemistry Research Department and worked developing and expanding the lab's large array of STEM programs focused on increasing the numbers of URM and Women in the graduate pool. The Bell Labs Summer Research Program, the Fellowship programs CRFP and GRPW (Graduate Research Program for Women), were models for the nation and combined have produced nearly 100 faculty members. In 1998 Wilson was awarded the AT&T Lincoln Hawkins Mentoring excellence award. After an illustrious career in industry and academia, he accepted the Executive Directorship at the Center for Nanoscale Systems and a lectureship appointment in the Department of Chemistry and Chemical Biology at Harvard University in 2015.

**Líney Árnadóttir** was born and raised in Iceland, moved to the US to obtain her doctorate at the University of Washington, and has remained in the Pacific Northwest since. She is the first in her family to move abroad and to pursue graduate education. As an Associate Professor in Chemical Engineering and Material Science at Oregon State University she has mentored a diverse graduate students (70% of her students are women or from other underrepresented groups in STEM) and has developed and taught, in collaboration with other faculty in her school, course modules on diversity, equality, and inclusion in engineering for graduate students. She also participates in the SESEY outreach program which consists of week-long, on-campus, STEM program for high school students from underrepresented groups. The Árnadóttir Group hosts inspiring scientists and engineers for research experience every summer through this program.

**Christopher Ober** grew up in Ontario, Canada, a product of its cultural mosaic, respectful of the national traditions of all citizens, and their mix of ethnic groups, languages, and cultures that coexist within its society. He is part of the leadership of the International Union of Pure and Applied Chemistry (IUPAC), the organization that names the chemical elements whose goals include serving humankind by advancing chemistry worldwide, bringing advanced science to developing nations and striving for diversity and inclusiveness in all forms. At Cornell, he works with the office of Diversity Programs in Engineering to bring nanoscience and technology to a broad science and engineering community. Ober is presently the Francis Bard Professor of Materials Engineering and Director of the Cornell NanoScale Facility.

**Heather Rauser** grew up in Montana and is a first-generation college graduate. Heather has worked in higher education for 15 years in grant project management and science outreach, including large projects aimed at rural and tribal Montana students. She has enjoyed communicating science to these students and has witnessed a profound impact by engaging students who do not always have exposure to higher education. She has often continued to mentor these students as they navigate applying to and attending university. Heather is regularly involved in courses and diversity initiatives on the Montana State University campus.

**Bruce Clemens's** work to reduce the influence of pre-conceived biases in the faculty hiring process resulted in a set of recommended procedures that has been adopted throughout the Stanford School of Engineering. While Board Member and President of the Materials Research Society, Clemens worked to strengthen ties with materials societies around the world, including, most notably, in Mexico and Africa,

where MRS organizes meetings and has student chapters jointly with local societies. He also taught the first materials science massively open on-line course. This course, entitled Solar Cells, Fuel Cells, and Batteries had over 20,000 students over the two years it was run, many of whom were from disadvantaged areas of the world. One of the students was Clemens's dad, who did not finish the course, but at least Bruce could call him up and say "Dad, turnoff the TV and go do your homework!" Bruce is the Walter B. Reinhold Professor Emeritus in the Department of Materials Science and Engineering at Stanford University. He is also a professor in the Photon Science Department at the SLAC National Accelerator Laboratory.

**Kristen Field** is a first-generation college student who came late to STEM (through an undergraduate degree in English and Global Studies, working non-STEM jobs while attending community college STEM courses and adult learning programs, eventually to a PhD in Behavioral Ecology and postdoctoral work on a USDA-supported feeding behavior project). By chance, she became involved in conversations about gender in ecology from the beginning of her STEM training and has stayed engaged in the DEI dialogues over the years and disciplines and works to interject best practices into any programming she can. As a co-PI for a National Science Foundation Partnership in International Research and Education (PIRE) award at the University of Pennsylvania, Kristin has directed the professional development and training for 20 Graduate Fellows, 2 Postdocs (PDs) and 23 undergraduates (UGs). For Penn's Singh Center, Field manages the Nanotechnology Master's Program, runs a monthly professional development series for graduate students and postdocs that brings in speakers to complement formal course and technical research training, and directs the summer REU program. Prior to this work, she delivered programming in two of Penn's interdisciplinary centers, Penn's NSF-supported Nano-Bio Interface Center and the Penn Genome Frontiers Institute (both now sunset).