

HIGHLIGHTS

New Joint Appointment Program with Montana State University

Recently, Triad National Security, LLC (Triad) and Montana State University (MSU) entered into an Institutional Agreement that allows for joint appointments of faculty and staff, marking a significant collaborative partnership. Opportunities for faculty members at MSU and researchers at Los Alamos National Laboratory (LANL) to work on joint projects, access specialized facilities, and draw upon diverse perspectives to tackle complex scientific questions are now available.

The LANL Joint Appointment Program builds on LANL's legacy of strong ties to academic institutions and enhances the abilities of the Laboratory and its partners to successfully execute their respective R&D and educational missions. The Triad-MSU Institutional Agreement is one of 16 such agreements between Triad and university partners. The Associate Laboratory Directorate for Weapons Production's Technical Applications Office (ALDWP-TAO) is leveraging this agreement to deepen its partnership with MSU.



Dr. David Miller, MSU Professor

At MSU, a R1 institution, faculty members are deeply committed to fostering interdisciplinary research and addressing real-world challenges. Dr. David Miller, a professor at MSU, will be on sabbatical at LANL this fall through a Joint Appointment with ALDWP-TAO. Dr. Miller attended Texas A&M University and earned BS, MS, and PhD degrees in Aerospace Engineering. Upon completion of his PhD, he started as a Post-Doctoral Researcher at LANL in January 2000. In July 2001 he converted to a Technical Staff Member in the Nuclear Materials Science group, MST-16, and remained in that group until he left the Laboratory for MSU in August 2007. At the time of his departure, he served as the Team Leader of the Mechanical and Dynamic Testing Team. This team operated the quasi-static, kolsky bar and 40mm gas gun in the plutonium facility at TA-55. Dr. Miller joined the Mechanical and Industrial Engineering Department at MSU in the Fall of 2007 and has since achieved the rank of Professor. Dr. Miller has established a research portfolio in the field of composites characterization for application to the wind, marine, and hydrokinetic energy industries. His work has also included experimental and numerical characterization of complex systems and structures. His recent research is expanding into small form factor machining and inspection systems and the integration of those processes for improved part tolerancing while minimizing machine tool footprint.

Casey Spawn, the Acting Group Leader for Q-18, the Advanced System Development group at LANL, has been approved by MSU as a Visiting Research Professor through a Joint Appointment. Casey joined LANL in April of 2016 after earning his BS in Mechanical Engineering from MSU and went on to earn his MS in Structural Engineering from the University of California San Diego in 2018. He has supported the LANL weapons programs ranging from detonator development and testing to system hostile qualification testing for the W88 Alt 370. His current work focuses on supporting Q-18's diverse scope addressing the future needs of deterrence and has specialized in earth penetration mechanics, earth penetrator field testing, system design, and prototyping. Casey has been developing advanced concepts and leading the engineering and testing efforts for hard and deeply buried targets at LANL since 2018.

Throughout his tenure at LANL, Casey has maintained close ties with MSU and has led many collaborative efforts between MSU and LANL. His work with MSU has spanned sponsorship, mentorship, and enablement of many Capstone groups, recruiting and student outreach activities, and undergraduate and graduate research contracts totaling over \$1.7M to date in collaboration with ALDWP-TAO. Casey assisted ALDWP-TAO with the DOE Secret Restricted Data (S/RD) accreditation of MSU's classified facility, the Applied Research Laboratory (ARL), enabling further collaborations with MSU with expanded scope and relevant classified contexts. By combining MSU's academic rigor with LANL's technological expertise, this joint appointment sets the stage for transformative discoveries and impactful innovations with wide-ranging implications.



Casey Spawn, Q-18 Group Leader

Dr. Robert “Bob” Putnam, the Director for ALDWP-TAO has also been approved as a Visiting Professor through a LANL joint appointment with MSU. He will assist in training cleared faculty, staff, and students in the protection of classified information and materials within the two classified laboratory spaces that LANL has contracted for classified manufacturing development in the MSU ARL. He will host a series of seminars at MSU, with guest speakers from across the DOE complex informing students of opportunities to work within a national laboratory environment.

Bob graduated with a PhD and MA in Geosciences from Princeton University in 1999 after obtaining BS and MS degrees in Physical Chemistry from Brigham Young University. He joined the staff at LANL in 1999 under the Laboratory’s Postdoctoral Program. From 2001-2005, he worked Directed Stockpile Surveillance as a pit engineer, team leader, and then program manager for weapon component surveillance at LANL. From June 2005-2011, Bob led elements of the Pit Manufacturing Program Office ending as the Program Director where he led the push through the manufacturing of the final qualification pits and completed the production run of the type 126 pits.



Dr. Robert Putnam, TAO Program Director

In 2011, Bob represented LANL in Washington, D.C., where he was a senior nuclear policy advisor for countering weapons of mass destruction to the Assistant Secretary of Defense for Global Security Affairs at the Pentagon. In 2014, he took a position as a member of the NNSA NA-10 Science Council advising the nuclear weapons programs of NNSA at DOE headquarters returning to LANL in November of 2016. In 2019, he formed the Technical Applications Office within ALDWP as Chief Production Scientist and Program Director.

In 2023, Bob was selected by the Office of Classification for the Department of Energy (DOE) as the Derivative Classifier of the year. He is the chief editor of a new Joint Savannah River and Los Alamos Pit Manufacturing Classification Guide. He has held line and program management positions around the laboratory up to the division level. He is a certified Project Management Professional (PMP) through the Project Management Institute and holds project management and LEAN manufacturing credentials from George Washington University and the University of Michigan.

We want to acknowledge the contributions of the LANL University Collaborations Office in the National Security Education Center in helping to establish the Triad–MSU Institutional Agreement.

