

Steven Shannon is a Professor and the Department Head of the Nuclear Engineering Department at North Carolina State University. He joined NC State in 2008 and started the Fourth State Applications Research Laboratory (4-STAR). Research in the 4-STAR group focuses on non-equilibrium processes to manufacture novel materials and devices, including engineering pathways to better understand radiation damage accumulation in materials and advanced pumping systems for liquid metal reactor systems. Prior to joining NC State, Dr. Shannon was a member of the technical staff at Applied Materials Inc. in Santa Clara, California, where he worked in new technology development for nano-scale manufacturing. He was also an Adjunct Professor at San Jose State University, where he taught plasma applications, ion beam processing, semiconductor manufacturing methods, and introductory material science classes in the Chemical and Materials Engineering Department. Dr. Shannon has graduated over a dozen PhD scholars, authored or co-authored over 60 refereed journal articles, and holds over 30 U.S. patents in manufacturing technology. In 2025, he was awarded the Plasma Prize by the American Vacuum Society for his contributions in the area of plasma source development for semiconductor manufacturing. Dr. Shannon holds a BSE, MSE, and Ph.D. in Nuclear Engineering from the University of Michigan.

