

Department of Physics Colloquium

Speaker: Dr. Paul Gueye

Associate Professor of Physics
Facility for Rare Isotope Beams
Michigan State University

“What if we could shrink ourselves and have discussions with nucleons?”

Open to the public, free of charge

Monday, January 22, 2024 - 4 p.m. – 1110 Rood Hall

Refreshments: 3:30-3:50 p.m., Bradley Commons, 2202 Everett Tower

Abstract: Particle accelerators have enabled scientists to get some insights about the interactions between protons and neutrons in nuclei. The use of electron and rare isotope beams are unique complementary techniques that provide powerful magnifying tools for such goal. Over more than a quarter century, the 4 GeV and now 12 GeV (un)polarized electron beam of the Thomas Jefferson National Accelerator Facility (Newport News, Virginia, USA) has dramatically enhanced our understanding of the microscopic nuclear world. On May 10, 2022, the Facility for Rare Isotope Beams (East Lansing, Michigan, USA) started its highly anticipated experimental nuclear astrophysics program, opening a new window in our ability to further extend our knowledge toward the proton and neutron driplines. Technological advancements required to achieve these milestones have also provided powerful imaging and therapeutic tools, crossing boundaries to other fields. This talk will provide some brief reviews on the role and successes as well as future prospects of nuclear physics experiments and theories at these facilities as they pertain to my journey in basic and applied nuclear physics, including programs to broaden participation for workforce development in nuclear science.

Parking: Metered parking is available in Parking Structure #2, near Miller Auditorium.

More information: (269) 387-4941 [Department of Physics email](#) [Campus map](#)

