## Physics and Astronomy Colloquium – Sept. 24th at 3:30 pm

Speaker: Marcel Demarteau

Division Director, Physics Division, Oak Ridge National Laboratory

Title: Quantum Sensing for Fundamental Physics

**Abstract:** Transformative discovery in science is driven by innovation in technology. Our boldest undertakings in fundamental physics have at their foundation precision instrumentation. To reveal the profound connections underlying everything we see from the smallest scales to the largest distances in the Universe, to understand its fundamental constituents, and to reveal what is still unknown, we must invent, develop, and deploy advanced instrumentation. There is a growing realization that we are at the dawn of the Second Quantum Revolution. Quantum computing gets all the attention these days, but the advances that are being made by multi-disciplinary teams in the development of materials and devices hold great promise for discoveries in fundamental physics. Examples will be given how this nascent field of research can advance our understanding of the nature of energy and time at its most fundamental level.

Zoom reservation:

Topic: Demarteau Session 3 Colloquium Time: Sep 24, 2020 03:00 PM America/Detroit

Join Zoom Meeting https://msu.zoom.us/j/95579854231

Meeting ID: 955 7985 4231 For the password, please refer to the Colloquium announcement sent out on Sept. 23<sup>rd</sup>