Department of Physics and Materials Science

SEMINAR

Exploring the Nature of Matter: An Overview of Current and Future Experiments at Jefferson Lab and the EIC

Dr. Michael Nycz
University of Virginia

Abstract: ongoing nuclear physics program at Jefferson Lab has been instrumental in advancing our understanding of the structure of the nucleus and its constituent nucleons, as well as testing the Standard Model through high precision measurements. In my talk, I will first give a brief overview of electron scattering, followed by an outline of my current and future research program. This science program focuses on understanding the three-dimensional structure of the nucleon though semi-inclusive deep inelastic scattering, studying the two-photon effect (TPE) in deep inelastic scattering through transverse single spin symmetries, and measuring the size of the TPE in elastic scattering. I will also discuss ongoing detector and hardware studies for the Solenoidal Large Intensity Device (SoLID), the new experimental apparatus planned to be constructed and installed in Jefferson Lab's Hall A facility. Finally, I will briefly discuss growing efforts related to electroweak and Beyond the Standard Model (BSM) physics at the future Electron Ion Collider (EIC).

Bio: Dr. Michael Nycz is currently a postdoctoral research at the University of Virginia, as well as a EIC Center Fellow associated with Jefferson Lab. He obtained his BS from Youngstown State University, and his PhD from Kent State University, where he studied the EMC effect of the tritium nucleus at Jefferson Lab. Following his PhD, he has worked as a postdoctoral fellow at Temple University before joining the University of Virginia.

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Tuesday, Feb. 27th, 3 - 4 PM Manning Hall 201

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