Old Dominion University
Department of Physics

Special Colloquium

Thursday, July 10, 2014

"Three-Dimensional Nucleon Structure: From Jefferson Lab 12 to Electron Ion Collider"

Dr. Alexei Prokudin
Jefferson Laboratory

A a great deal of experimental and theoretical progress has been achieved in our understanding of partonic structure of hadrons in recent decades. I will discuss our current knowledge of hadron structure from the point of view of Quantum Chromodynamics, the theory that describes the hadron as a dynamical system of partons (quarks and gluons). I will emphasize the emerging concept of 3D (three-dimensional) parton distributions and discuss their formal definition and phenomenology. Jefferson Lab 12 will play crucial role in experimental investigation of nucleon structure. I will explain details of the program and show the potential of future measurements. I will also discuss future of nuclear physics beyond Jefferson Lab 12 at a proposed Electron-Ion Collider.

Presentation: OCNPS 200 @ 11:30 am
Refreshments: OCNPS Atrium @ 11:00 am

All interested persons are cordially invited to attend.