

Nobuo Sato, Old Dominion University

Academic Profile

Postdoctoral Fellow, Old Dominion University (2018-present)
Postdoctoral Fellow, University of Connecticut (2017-2018)
Postdoctoral Fellow, Center for Theoretical and Computational Physics,
Thomas Jefferson National Accelerator Facility (2008-2014)
Ph.D. Physics, Florida State University, (2014)
B.S. in physics, Universidad del Valle, (2008)

Awards

- JSA/JLab Nathan Isgur Fellowship in Nuclear Theory (Oct-2019)
- JSA Annual Postdoctoral Prize 2017

Research Interests

- Perturbative QCD: higher order QCD calculations, resummation, target mass corrections, QCD factorization
- Hadron structure: baryon and mesons PDFs and TMDs
- Hadronization: fragmentation functions
- QCD global analysis: Jefferson Angular Momentum collaboration(JAM), CTEQ-JLab collaboration (CJ)
- MC event generators: machine learning at Jlab's LDRD-1913
- Jet physics: jets in heavy ions

Research Community Service & Contribution to the JLab Scientific Program

- Referee for Physical Review (C, D, letters), Journal of Physics G, European Physical Journal C
- Co-organizer QCD evolution 2017, 2019
- Co-organizer EIC Users group meeting (3D Imaging, Mass and Spin) 2018

Candidate Statement

Several decades of high-energy scattering experiments have given us intriguing, though limited, glimpses into the inner structure of protons and neutrons. With the 12 GeV nuclear physics program at Jefferson Lab underway, and plans being made for a future Electron-Ion Collider, we are at the threshold of imaging the nucleon's three-dimensional structure through its quark and gluon quantum probability distributions. Since 2015, when I joined the lab as a Theory Center postdoc, I have been part of several research projects involving theorists and experimentalists, including the Jefferson Angular Momentum (JAM) collaboration, CTEQ-Jefferson Lab (CJ) collaboration, the LDRD-1811 (Phenomenological study of hadronization in nuclear and high-energy physics experiments), and the LDRD-1913 (Universal Monte Carlo event generator), to mention a few. These projects have allowed me to understand the value and importance of dedicated dialog among theory, experiment, and the scientific computing division at the lab. I believe that such dialog is crucial for the success of the JLab 12 GeV program, and if elected I will do my best to serve the JLab User Group as its Experiment/Theory Liaison.