

Strong QCD from Hadron Structure Experiments Workshop

Tuesday, November 5, 2019 - Saturday, November 9, 2019

Jefferson Lab

Scientific Program

This Workshop aims to develop plans and to facilitate the future synergistic efforts between experimentalists, phenomenologists, and theorists working on studies of hadron spectroscopy and structure with a goal to elucidate hadron emergence from QCD. The Workshop topics include:

- Determination of hadron 3-D imaging and the mass, momentum and pressure distributions within hadrons from the data of experiments with electromagnetic probes;
- Insight into 1-D meson and baryon parton distributions;

- Meson and baryon spectroscopy and the search for new states of hadronic matter in photo- and electroproduction experiments;
- Studies of hadron elastic/transition electromagnetic form factors;
- Advances and prospects of ab initio QCD descriptions of the hadron spectrum and elastic/transition electromagnetic form factors;
- Emergence of hadron structure within continuum QCD approaches and their impact on experiments with electromagnetic probes;
- Quark model advances in the description of the hadron spectrum and the elastic and transition electromagnetic form factors;
- Development of a QCD-rooted theory framework for the unified description of hadron structure from 1-D form factors, PDFs, and PDAs to 3-D femto-images;
- Relating the nucleon and meson structure to atomic nuclear structure;
- Studies of the impact of these efforts on the science case for a future Electron-Ion Collider.