Strong QCD from Hadron Structure Experiments

Second Circular

The topical Workshop ``Strong QCD from Hadron Structure Experiments" is scheduled at Jefferson Lab for November 6-9, 2019. The Workshop takes place in a very promising and challenging time for hadron physics with electromagnetic probes. The successful start of the new 12-GeV era of experiments in the four halls at Jefferson Lab in the U.S., as well as the advances in the European facilities ELSA, MAMI, and GSI, and the Asian facilities BES, SPring-8, and JPARC, have considerably extended the scope of the experimental studies of the ground and excited state hadrons. These results pave the way for a future breakthrough extension in the studies of QCD with an Electron-Ion Collider in the U.S. Impressive progress in relating hadron structure observables to the strong QCD mechanisms has been achieved from the *ab initio* QCD description of hadron structure to a diverse array of methods in order to expose emergent phenomena via quasi-particle formation. The wealth of experimental data and the advances in hadron structure theory make it possible to gain insight into strong interaction dynamics in the regime of large quark-gluon coupling (the strong QCD regime), which will address the most challenging problems of the Standard Model on the nature of the dominant part of hadron mass, quark-gluon confinement, and the emergence of the ground and excited state hadrons, as well as atomic nuclei, from QCD.

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 the goal to connect the properties of hadrons and atomic nuclei available from data to the strong QCD dynamics underlying their emergence from QCD. For the Workshop the CEBAF auditorium has been allocated. All speakers can upload their talk through Indico at the Workshop website https://www.jlab.org/conference/QCD2019 or send their powerpoint and/or PDF to the LOC Chair V.I. Mokeev (mokeev@jlab.org)

The pre-workshop Remei Symposium "Synergies in Hadron Physics between J-PARC and JLab" is scheduled for November 5, 2019 from 1:30 p.m. to 5:00 p.m. in CEBAF Center. The agenda can be found on the Workshop website at the above link (click on the link for the pre-workshop Reimei Symposium agenda).

As a part of the Workshop we will have a special session honoring the outstanding scientific achievements and the inspiring leadership of Volker Burkert for more than 30 years of his research at Jefferson Lab. Volker was named as a prestigious Virginia Outstanding Scientist Award recipient in 2019. See the Workshop agenda for full details.

We are also planning on Friday, November 8 at 5:00-7:00 p.m. a round table discussion on the planning of synergistic efforts between experimentalists, phenomenologists, and theorists on the exploration of the ground and excited state hadron spectrum/structure from the data of the 12 GeV era to gain insight into strong QCD, to understand the properties of atomic nuclei from

strong QCD, and to map out novel directions with the U.S.-based EIC. Participants are encouraged to contribute with up to two slides and remarks limited to no more than 5 min.

We look forward to seeing you at Jefferson Lab soon!

Your Local Organizing Committee:

V.I. Mokeev, Chair,

D.S. Carman,

J-P. Chen,

L. Elouadrhiri,

K. Joo,

D.G. Richards,

C.D. Roberts.