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Structure of pion and kaon from lattice QCD

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Direct lattice computation of the key measures of hadron structure such as the form factors, parton distribution functions, quark distribution amplitudes have always been challenging. With current enormous experimental efforts at JLab (with its 12 GeV upgrade), COMPASS in CERN, RHIC-spin and at a future EIC, it is now crucial to test and exploit the newly proposed lattice QCD ideas in hadron structure which requires increasingly high momenta. In this talk, I will discuss our recent progresses in pion/kaon structure calculations using lattice QCD. In particular, I will describe our progress at understanding the valence quark distributions of the kaon using configuration-space separated gauge-invariant hadronic currents following a recent theoretical development [Phys.Rev.Lett. 120 (2018) no.2, 022003]. I will also briefly discuss our alternative approach using method of distillation to reach higher moemnta in simpler hadronic quantities such as pion electromagnetic form factor.

Primary author: Dr CHAKRABORTY, Bipasha (Jefferson Lab)

Co-authors: Mr EGERER, Colin (William and Mary); Dr RICHARDS, David (Jefferson Laboratory); Prof. QIU, Jianwei (Brookhaven National Laboratory); KARPIE, Joseph (William and Mary); Prof. ORGINOS, Kostas Orginos (William and Mary / Jlab); BRICENO, Raul (ODU/JLab); SUFIAN, Raza (Jef); Dr EDWARDS, Robert (Jefferson Lab)

Presenter: Dr CHAKRABORTY, Bipasha (Jefferson Lab)

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