Contribution ID: **16** Type: **not specified**

Resolving the Scales of the Quark-Gluon Plasma with Energy Correlators

Tuesday, December 6, 2022 4:00 PM (45 minutes)

Jets provide us with ideal probes of the quark-gluon plasma (QGP) produced in heavy-ion collisions, since its dynamics at its different scales is imprinted into the multi-scale substructure of the final state jets. This talk discusses a new approach to jet substructure in heavy-ion collisions based on the study of correlation functions of energy flow operators. By analysing the two-point correlator of an in-medium quark jet, the spectra of correlation functions robustly identify the scales defined by the properties of the QGP, particularly those associated with the onset of colour coherence. Preliminary results extending previous work to heavy flavour jets and more sophisticated models for medium interactions will be discussed.

Primary author: HOLGUIN, Jack (CPHT Ecole Polytechnique)

Presenter: HOLGUIN, Jack (CPHT Ecole Polytechnique)