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## Probing hadronization with flavor correlations of leading particles in jets

*Thursday, 7 July 2022 12:00 (15 minutes)*

I will discuss nonperturbative flavor correlations between pairs of leading and next-to-leading charged hadrons within jets at the Electron-Ion Collider (EIC). We introduce a charge correlation ratio observable  $r_c$  that distinguishes same- and opposite-sign charged pairs. Using Monte Carlo simulations with different event generators,  $r_c$  is examined as a function of various kinematic variables for different combinations of hadron species, and the feasibility of such measurements at the EIC is demonstrated. I will also discuss the correlation between leading hadrons and leading subjects which encodes the transition between perturbative and nonperturbative regimes. The precision hadronization study we propose will provide new tests of hadronization models and hopefully lead to improved quantitative, and perhaps eventually analytic, understanding of nonperturbative QCD dynamics.

### In-person participation

No

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