## **SCET 2017**



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## Jet axes and universal TMD fragmentation

Wednesday 15 March 2017 09:00 (40 minutes)

We study the transverse momentum spectrum of hadrons in jets. By measuring the transverse momentum with respect to a judiciously chosen axis, we find that this observable is insensitive to (the recoil of) soft radiation. For small transverse momenta we show that the effects of the jet boundary factorize, leading to a new transverse-momentum-dependent (TMD) fragmentation function. In contrast to the usual TMD fragmentation functions, it does not involve rapidity divergences. We discuss potential applications, including the study of nuclear modification effects in heavy-ion collisions and identifying boosted heavy resonances.

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