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## Factorization for Jet Substructure

*Tuesday, March 14, 2017 9:00 AM (40 minutes)*

I will discuss recent advances in resummation of observables for probing the substructure of jets. By grooming the jet with soft drop, non-global logarithms in the jet mass can be removed. Extending the factorization theorem for soft drop jet mass, we are able to calculate the distribution of  $D_2$ , an observable that is sensitive to two-prong structure in the jet. The soft dropped  $D_2$  distribution is remarkably robust: we show that it is approximately independent of jet energy, non-perturbative corrections are suppressed by the jet mass, and fixed-order corrections can be formally made arbitrarily small.

**Primary author:** LARKOSKI, Andrew

**Co-authors:** NEILL, Duff (Carnegie Mellon University); MOULT, Ian

**Presenter:** LARKOSKI, Andrew

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