Contribution ID: **338** Type: **Talk**

Locally smeared operator product expansions

Thursday, 26 June 2014 16:15 (20 minutes)

We propose a new "smeared" operator product expansion (sOPE) in
which the set of local operators in the OPE are replaced by their locally smeared counterparts, generated by the gradient flow. The flow time, or smearing, parameter serves as a regulator for both Wilson coefficients and operator products. Matrix elements determined
nonperturbatively on the lattice using smeared degrees of freedom remain finite in the continuum limit, provided the physical smearing scale is kept fixed. We study the sOPE in scalar field theory and discuss the application to Deep Inelastic Scattering.

Primary author: Dr MONAHAN, Christopher (College of William and Mary)

Co-author: Prof. ORGINOS, Kostas (College of William and Mary/Jefferson Lab)

Presenter: Dr MONAHAN, Christopher (College of William and Mary)

Session Classification: Theoretical Developments

Track Classification: Theoretical Developments