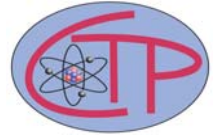




*NEW YORK CITY COLLEGE OF TECHNOLOGY*  
Physics Department  
Center for Theoretical Physics



**Informal Discussion on:**

**An Algebraic Approach to Color-Kinematic Duality and Formulations of Yang-Mills Amplitudes**

*Led by:*

**Chih-Hao Fu**

**National Chiao Tung University, Taiwan**

**Friday, February 8 at 2 pm**

**Namm, Room 823**

**Abstract**

The duality discovered by Bern, Carrasco and Johansson suggests an algebraic-like structure of Yang-Mills amplitudes that is unforeseen from the Lagrangian perspective. This provides a promising mechanism for the possible UV finiteness of  $N=8$  supergravity theory. In particular, a new version of the KLT relation was conjectured based on the duality, and has been recently verified at 4-pts up to four loops. I shall discuss how the building blocks in the duality can be constructed, as well as a few new formulations also suggested by the duality as counterparts of the familiar formulations of Yang-Mills amplitudes.

*Based on arXiv:1212.6168 and 1105.3503.*