Contribution ID: **18** Type: **Long talk (20 mins)**

Pushforwards through the Scattering Equations

Thursday, 15 December 2022 15:30 (30 minutes)

In the past decade, the *CHY formalism* and *positive geometries* have arisen as interesting new ways to think about scattering amplitudes in certain theories. The former allows for scattering amplitudes to be calculated by summing over the solutions to a set of rational equations (the *scattering equations*), whereas the latter allows for scattering amplitudes to be calculated as the canonical form of certain geometric objects that live in the kinematic space (such as *amplituhedra*).

Although their development has been largely distinct, it has recently become clear that there is a direct connection between the two. This connection is facilitated by calculating *pushforwards* through the scattering equations. To further investigate this remarkable connection, in [2206.14196] we develop tools to calculate these pushforwards using techniques from algebraic geometry. In this talk I will give an introduction to the connection between positive geometry and scattering equations, and explain how these pushforwards can be calculated without having to solve the scattering equations explicitly.

Type of presentation

20 minute talk

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Amplitudes

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Session Classification: Full Length Talks