Thomas Lam

Scattering amplitudes and configuration space

Abstract

Recent developments in quantum field theory have revealed new symmetries and hidden structures within scattering amplitudes. Many of the most striking phenomena occur in maximally supersymmetric gauge theories (N=4 super Yang-Mills). I will discuss some developments in combinatorial algebraic geometry of configuration spaces inspired by the study of these amplitudes, and the relations to tropical geometry and cluster algebras. The talk will be based on various joint works with Nima Arkani-Hamed, Song He, Marcus Spradlin, and Hugh Thomas.