

Geometric invariants of non-archimedean semi-algebraic sets

Abstract: Semi-algebraic sets over non-archimedean fields appear naturally in tropical and non-archimedean geometry. I will explain how one can use Hrushovski and Kazhdan's theory of motivic integration to attach geometric invariants to these semi-algebraic sets. We used this construction to propose geometric interpretations for the refined curve counting invariants of Göttsche and Shende and the corresponding refined tropical multiplicities of Block and Göttsche. This talk is based on joint work with Sam Payne and Franziska Schroeter.