

The Institute of the Mathematical Sciences of the Americas

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Integral PL Actions from Birational Geometry

Maxime Kontsevitch

The group of birational automorphisms of a N -dimensional algebraic torus, preserving the standard logarithmic volume element, acts (by tropicalization) on N -dimensional real vector space by homogeneous piece-wise linear homeomorphisms. A similar construction exists for any compact Calabi-Yau variety over a non-archimedean field, through the notion of the "essential EEEE". I'll talk about examples coming from generalized cluster varieties, and from Calabi-Yau varieties parameterizing linkages of regular graphs.