

# An overview of Non-Reductive Geometric Invariant Theory and its applications

*Tuesday, 19 July 2022 16:00 (1 hour)*

Geometric Invariant Theory (GIT) is a powerful theory for constructing and studying the geometry of moduli spaces in algebraic geometry. In this talk I will give an overview of a recent generalisation of GIT called Non-Reductive GIT, and explain how it can be used to construct and study the geometry of new moduli spaces. These include moduli spaces of unstable objects (for example unstable Higgs/vector bundles), hypersurfaces in weighted projective space,  $k$ -jets of curves in  $\mathbb{C}^n$  and curve singularities.

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