

POISSON GEOMETRY OF WILD PARABOLIC HIGGS BUNDLES

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A Higgs bundle consists of a holomorphic vector bundle, typically over a compact Riemann surface, together with a Higgs field—i.e., a holomorphic section of the associated bundle twisted by the canonical bundle. Since their introduction, numerous variants of Higgs bundles have been studied, and their moduli spaces have provided rich examples of hyperkähler manifolds, with deep connections to mirror symmetry, representation theory, and integrable systems.

In this talk, we will explore the Poisson geometry of the moduli space of parabolic Higgs bundles, as well as their wild (irregular) counterparts. This is joint ongoing work with Indranil Biswas, Ana Peón-Nieto, and Szilárd Szabó.