

Intersection cohomology of moduli of vector bundles

Thursday, March 6, 2025 4:00 PM (1 hour)

Intersection cohomology is a topological notion adapted to the description of singular topological spaces, and the Decomposition Theorem for algebraic maps is a key tool in the subject. Motivated by the work of Mozgovoy and Reineke, in joint work with Andras Szenes and Olga Trapeznikova, we give a complete description of the intersection cohomology of the moduli space of vector bundles of any rank via a detailed analysis of the Decomposition Theorem applied to a certain map from parabolic bundles. We also give a new formula for the intersection Betti numbers of these moduli spaces, which has a clear geometric meaning.

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