

Olga Trapeznikova, University of Geneva

The Verlinde formula and K-theory of the moduli space of parabolic vector bundles.

The Verlinde formula, an expression for the Hilbert function of the moduli spaces of parabolic vector bundles on Riemann surfaces, is one of the most beautiful results in enumerative geometry. In this talk, I will present a new proof of this formula (joint work with Andras Szenes) based on a wall-crossing technique and the tautological Hecke correspondence. A more general problem is the calculation of Euler characteristics of universal vector bundles on moduli spaces, and I will explain how our approach can be used to deduce explicit formulas in this case. This result was motivated by the work of Teleman and Woodward.