Higher rank interpolation problems and the birational geometry of moduli spaces of sheaves

Abstract:
Questions like the Nagata conjecture seek to determine when certain zero dimensional schemes impose independent conditions on sections of a line bundle on a surface. Understanding analogous questions for vector bundles instead amounts to studying the birational geometry of moduli spaces of sheaves on a surface. We explain how to use higher-rank interpolation problems to compute the cone of effective divisors on any moduli space of sheaves on the plane. This is joint work with Izzet Coskun and Matthew Woolf.