



DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

## Colloquium

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# CLASSICAL INVARIANT THEORY AND BIRATIONAL GEOMETRY OF MODULI SPACES

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### ABSTRACT

Invariant theory is a study of the invariant subring of a given ring equipped with a linear group action. Describing the invariant subring was one of the central mathematical problems in the 19th century and many great algebraists such as Cayley, Clebsch, Hilbert, and Weyl had contributed to it. Still invariant theory is an active part of modern algebraic geometry, and one reason is that there are many interesting connections between invariant theory and modern birational geometry of moduli spaces. In this talk I will explain some concrete examples of this connection, including the moduli space of parabolic vector bundles on the projective line and the moduli space of stable rational pointed curves.

**Wednesday, 4 November 2015**

**4:00 pm**

**Smith Hall 204**

Tea and refreshments will be served at 3:45pm.

<http://math.newark.rutgers.edu/~xiaowwan/Colloquium/>