

BOSTON UNIVERSITY GEOMETRY AND PHYSICS SEMINAR

## SYMMETRIC PRODUCTS OF PROJECTIVE SPACE AND GROMOV-WITTEN THEORY

Robert Silversmith  
Northeastern University

February 6, 2019, 4:00 – 5:00pm  
Math/Computer Science, Room 148  
111 Cummington Street, Boston

Tea: 3:45pm in Room 148

**Abstract:** I'll discuss the structure of the (orbifold) symmetric products of projective spaces  $\text{Sym}^d(\mathbb{P}^r)$ , focusing on the orbits of the natural torus action. These orbits vary in nice moduli spaces – for example, components of the moduli space of 1-dimensional orbits are naturally identified with certain toric compactifications of  $\mathcal{M}_{0,n}$ . I will then discuss how one can use these orbits to calculate Gromov-Witten invariants of  $\text{Sym}^d(\mathbb{P}^r)$ . If I have time, I'll also talk about the analog when  $\text{Sym}^d(\mathbb{P}^r)$  is replaced with the Hilbert scheme of points in  $\mathbb{P}^2$ .

See <http://math.bu.edu/research/geom/seminar.html> or contact Yoosik Kim ([yoosik@bu.edu](mailto:yoosik@bu.edu)) or Siu-Cheong Lau ([lau@math.bu.edu](mailto:lau@math.bu.edu)) for more information.