BOSTON UNIVERSITY GEOMETRY AND PHYSICS SEMINAR

VIRTUAL GROTHENDIECK-RIEMANN-ROCH VIA DERIVED SCHEMES

Parker Lowrey
Wisconsin

Nov 6, 2013, 4:00 – 5:00pm
Math/Computer Science, Room 148
111 Cummington Street, Boston

Tea: 3:45pm in Room MCS 144

Abstract: The usefulness of the various Riemann-Roch formulas as computational tools is well documented in literature. Grothendieck-Riemann-Roch is a commutative diagram relating push-forward in K-theory to the push-forward of associated Chow invariants for locally complete intersection (l.c.i.) morphisms. We extend this notion to quasi-smooth morphisms between derived schemes, this is the "derived" analog of l.c.i. morphisms and it encompasses relative perfect obstruction theories. We will concentrate on the naturality of the construction from the standpoint of pure intersection theory and how it interacts with the virtual Gysin homomorphism defined by Behrend-Fantechi. Time permitting we will discuss the relationship with existing formulas, i.e., Ciocan-Fonanine, Kapranov, Fantechi, and Goettsche.

See `http://math.bu.edu/research/geom/seminar.html` or contact Si Li *sili@math.bu.edu* for more information.