



GEOMETRY, TOPOLOGY, AND PHYSICS SEMINAR

Self-duality, K-theory, and Orientifolds

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Friday, January 18, 2008, 4:00 p.m.
Room 6635 South Hall

Abstract: In joint work with Jacques Distler and Gregory Moore we develop the theory of Ramond-Ramond fields on orientifolds in string theory. The mathematics we encounter includes the localization theorem in (twisted) equivariant KO-theory, KO-theoretic Wu classes, the self-duality of KO, etc. We derive the gravitational contribution to Ramond-Ramond charge, generalizing a previous result in Type I (the Green-Schwarz anomaly cancellation). Over the rationals this agrees with the formula derived by Morales-Scrucca-Serone from the worldsheet point of view.