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SANTA BARBARA • SANTA CRUZ

## GEOMETRY, TOPOLOGY, AND PHYSICS SEMINAR

## A Mathematical Introduction to F-theory, II

## David Morrison UCSB

## Friday, May 14th, 2010, 4:00 p.m. Room 6635 South Hall

**Abstract:** In the first lecture, I explained (among other things) how Kodaira's theory of singular fibers in elliptic pencils can be used to assign a reductive group to every elliptic fibration (which is the gauge group in the corresponding F-theory model).

In this lecture, the focus will be on assigning a representation of that group to the fibration (which represents the massless matter in the corresponding F-theory model). Along the way, we will meet anomalies in 6-dimensional physical theories and explain what they mean for the elliptic fibration.