Topology-Analysis-Geometry Seminar

UNIVERSITY OF NOTRE DAME
Department of Mathematics

Speaker: **Matt Gursky**
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Thursday, September 18, 2014
11:00 am
Room: 125 Hayes-Healy Hall

Title: Critical metrics on connected sums of Einstein four-manifolds

Abstract:
This is joint work with Jeff Viaclovsky. I will describe a gluing procedure designed to obtain canonical metrics on connected sums of Einstein four-manifolds. The main application is an existence result, using two well-known Einstein manifolds as building blocks: the Fubini-Study metric on $\mathbb{CP}^2$ and the product metric on $S^2 \times S^2$. Using these metrics in various gluing configurations, toric-invariant critical metrics are found on connected sums for a specific Riemannian functional, which depends on the global geometry of the factors.