Claude LeBrun, Stony Brook University

*Four-Manifolds, Einstein Metrics, and Differential Topology*

An Einstein metric is by definition a Riemannian metric of constant Ricci curvature. One central problem of modern differential geometry is to completely determine which smooth compact n-manifolds admit such metrics. In this talk, I will describe ways in which the 4-dimensional case involves phenomena which are utterly unlike anything seen in other dimensions. I will then go on to discuss recent results regarding 4-dimensional Einstein manifolds. Many of these results focus on 4-manifolds that also happen to carry either a complex structure or a symplectic structure.

Thursday, November 7, 2013
at 4:00 PM in 532 Malott Hall

Refreshments will be served at 3:30 PM in the Mathematics Department lounge (532 Malott Hall).