**Brandeis – Harvard – MIT – Northeastern**

**Mathematics Colloquium**

**“Ricci flow in higher dimensions”**

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Abstract: The Ricci flow, introduced in 1982 by Richard Hamilton, has become one of the most important tools for studying the geometry and topology of manifolds. In dimension 3, we have a good understanding of how singularities form thanks to the work of Hamilton and Perelman. In this lecture, I will discuss how results of a similar nature can be obtained in higher dimensions, under suitable restrictions on the curvature of the initial metric. As a corollary, we obtain a classification, up to diffeomorphism, of all manifolds satisfying these curvature conditions. Our assumptions are sharp in many interesting geometric situations, such as for projective spaces and products of spheres.

**Thursday April 27th, 2017**

**4:30PM-5:30PM**

**MIT, Room 2-190**

**Reception in 2-290 at 4:00PM**