COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

Samuel Eilenberg Lectures

Fall 2014

Simon Brendle
Professor, Stanford University

"Partial Differential Equations in Geometry"

"A central theme in geometry is the study of manifolds and their curvature. In this lecture series, we will discuss how techniques involving partial differential equations have shed light on several longstanding problems in global differential geometry. In the first part of the course, we will focus on the geometry of hypersurfaces, and discuss our proof of Lawson's conjecture concerning minimal tori in S^3, as well as new results on mean curvature flow with surgery. In the second part, we will focus on the Ricci flow, including the Differentiable Sphere Theorem and Perelman's question concerning the uniqueness of the Bryant soliton. "

Every Friday at 1:00 pm 312 Mathematics Hall
First Lecture: September 5th

Tea will be served at 3 pm in 508 Mathematics Hall
2990 Broadway at 117th Street