

# FELIX KLEIN SEMINAR



**Raquel Perales Aguilar**  
**Stony Brook University**

*Rectifiable Gromov-Hausdorff Limits of Sequences of Manifolds with Boundary*

Thursday, October 9, 2014

2:00PM in 125 Hayes-Healy Hall

## ABSTRACT:

We prove a Gromov-Hausdorff compactness theorem for sequences of metric spaces  $(X, d)$  with boundary,  $\partial X = \bar{X} \setminus X$ . Then we state necessary conditions so that if a sequence converges in both Gromov-Hausdorff and Intrinsic Flat sense then both limits agree. This automatically implies that the limit space we get is countably rectifiable. Our main applications consider non-collapsing sequences of Riemannian manifolds with smooth boundary whose interior has nonnegative Ricci curvature.