



Colloquium

**Adrian Ioana
(Clay Fellow/Caltech)**

**“Rigidity in orbit equivalence and
von Neumann algebras”**

Wednesday, January 28, 2009

4:00pm

Surge 284

Tea Time at 3:40pm

Abstract: The first examples of von Neumann algebras came from actions of countable groups on probability spaces. As it turns out, their study (up to isomorphism) is closely related to the study of countable equivalence relations (up to orbit equivalence). Recently, this connection proved to be very useful, leading to remarkable rigidity results in both orbit equivalence and von Neumann algebras theory. In this talk, I will survey some of these results including: existence of II_1 factors without symmetries, new cocycle superrigidity results, and existence of non-orbit equivalent actions for arbitrary non-amenable groups.