



# UNIVERSITY OF CALIFORNIA RIVERSIDE

DEPARTMENT OF MATHEMATICS

## COLLOQUIUM

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**Aviv Censor**  
(Tel-Aviv University)

### “Towards Topological Groupoidification”

**Abstract:** Groupoidification, a form of categorification, was introduced by John Baez, James Dolan and Todd Trimble. It has been successfully applied to several structures, which include Feynman Diagrams, Hecke Algebras and Hall Algebras. In order to expand the scope of groupoidification, with operator algebras in mind, we take first steps in extending the theory from the discrete setting to the realm of topology, measure theory and analysis. In particular, we introduce the category HG, whose objects are topological groupoids endowed with compatible measure theoretic data: a Haar system and a measure on the unit space. We then study the notions of groupoid cardinality and weak-pullback in this category, providing the framework for our attempt at topological groupoidification. This is joint work with Daniele Grandini. The talk will be aimed at a general mathematical audience, previous acquaintance with groupoids will not be assumed.

**Wednesday, May 25<sup>th</sup>, 2011**

**Surge 284**

**4:10-5:00pm**

*Tea Time at 3:40pm*