

# ALGEBRA SEMINAR

## *The Stable Symplectic Category*

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ABSTRACT: The symplectic category was introduced by A. Weinstein as an attempt to construct a category that supports the geometric quantization functor. The objects in this category are symplectic manifolds, and morphisms are defined as immersed lagrangian correspondences. Unfortunately, composition in this category is not always well defined. We rectify this problem by introducing a suitable stabilization of the Symplectic category. This gives rise to an  $A_\infty$  category we call the stable symplectic category. In my talk I will describe the structure of the stable symplectic category. In particular, I will show that this category admits a natural group of automorphisms which can be identified with an abelian quotient of the Grothendieck-Teichmüller group (GT-group). This observation gives support to a conjecture of Kontsevich that suggests that the moduli space of field theories admits an action of the GT-group. This is joint work in part with Jack Morava.

MONDAY, NOVEMBER 18, 2013

1:40 – 2:30 PM

ROOM 617, WACHMAN HALL  
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