

University of Notre Dame Department of Mathematics
SPECIAL TOPICS SEMINAR

Theodore Voronov

University of Manchester

Will give a lecture entitled:

**Supermanifolds, brackets structures and microformal geometry
II**

On

Friday, March 2, 2018

At

4:00 PM

In

129 Hayes-Healy Hall

Abstract

The aim of these lectures is to introduce the notion of thick (aka microformal) morphisms of (super)manifolds and to develop their application to brackets structures, e.g. homotopy Poisson manifolds and L-infinity algebroids. Thick morphisms are not maps, but they include ordinary smooth maps as a special case. The main feature of these morphisms is that they induce pullbacks on smooth functions that are in general non-linear. This non-linearity is essential for application to homotopy brackets. Though the definition of thick morphisms does not require itself anything "super", the applications are based on supergeometry. Hence I will start from recollection of the language of supermanifolds in differential geometry, in particular, for bracket structures. Tentative plan: 1. The language of supermanifolds in differential geometry. 2. Construction and properties of thick morphisms. Examples. 3. "Quantum" thick morphisms. Further developments.