

Seminar

Dr. Florian Schätz

U Aarhus

Representations of the based loop space

Friday, May 15, 2015

at 16:00 h

ESI, Schrödinger Lecture Hall

Abstract: Let X be a connected manifold. It is well known that there is an equivalence of categories between the representations of the fundamental group of X and the flat vector bundles over X . The aim of the talk is to explain a higher version of this statement, where the fundamental group is replaced by the singular chains on the based loop space of X . Concatenation of loops equips the chains with a multiplication, called the Pontryagin product. The representations of the resulting algebraic structure turn out to be essentially equivalent to something comparably simple, namely the dg category of flat superconnections over X .

The talk is partly based on joint work with Camilo Arias Abad (Universidad Nacional de Colombia, Medellín).

Nils Carqueville

April 27, 2015