

Differential graded manifolds as a model for derived manifolds

David Carchedi, George Mason University, Fairfax VA – 22030

Abstract

Given two smooth maps of manifolds $f : M \rightarrow L$ and $g : N \rightarrow L$, if they are not transverse, the fibered product $M \times_L N$ may not exist, or may not have the correct cohomological properties. In the world of derived manifolds, such a fibered product always exists as a smooth object, regardless of transversality. In this talk we will describe recent progress of ours with D. Roytenberg on giving an accessible geometric model for derived manifolds using differential graded manifolds.

Keywords: manifolds, derived geometry, homological algebra.