MICHAEL LAMBERT, Dalhousie University

A Tensor Product of Fibrations as a Codescent Object

This talk will give an explicit construction of a tensor product of an opfibration and a fibration over the same base category. That this is indeed a tensor product is attested to by an associated tensor-hom adjunction; and by the fact that tensoring with a fixed opfibration induces a category-valued 2-functor that, under conditions generalizing the well-known characterization of flat set-valued functors in terms of filtered categories, is left exact. Ordinary fibrations and opfibrations are known to be algebras for certain colax-idempotent 2-monads. The explicit tensor product construction can be used to show that it is a codescent object of coherence data arising from the structure maps coming with the opfibration and fibration.