We will continue online on Thursday, **March 4th, at 1pm on ZOOM platform** (for information how to acces seminar and next programme visit
this page
) by the talk:

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Dependently typed algebraic theories

Abstract:
For S a set, S-sorted algebraic (or "Lawvere") theories are, equivalently, finite-product categories whose objects are freely generated by S, finitary monads on Set/S, or monoids in a category of "S-coloured cartesian collections".

When S is a suitable direct category, I will describe equivalences of categories between finitary monads on [S^op, Set], monoids in a category of "S-coloured cartesian collections", and a certain category of contextual categories (in the sense of Cartmell) under S^op.

Examples of such S are the categories of semi-simplices, globes and opetopes. Opetopes will be a running example, and we will see that there are three idempotent finitary monads on the category of opetopic sets, whose algebras are, respectively, small categories, coloured planar Set-operads, and planar coloured combinads (in the sense of Loday).

This is partly joint work with Peter LeFanu Lumsdaine, and partly joint work with Cédric Ho Thanh.