Double categories as a model for (oo,1)-categories

vendredi 25 octobre 2024 09:15 (55 minutes)

In this talk, I will present a joint work with Lyne Moser where we prove that double categories model (oo,1)-categories. More precisely, we equip the category of double categories with a model category structure and show that it is Quillen equivalent to the Rezk model category structure on bisimplicial sets.

I will also explain how this model of (oo,1)-categories is related to other "categorical" models, such as categories internal to simplicial sets due to Horel, relative categories due to Barwick and Kan and 2-categories due to Pavlov.

Finally, I will present some conjectural nice features of this model of (oo,1)-categories, which are motivating on their own.

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