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Announcement

Oberseminar Geometrie

18th of May 2022 at 2:15pm CEST/CES

Zoom
https://uni-wuerzburg.zoom.us/j/96587647828?pwd=ZjliUHpkd3J2cDlpVFBYRmlrYkRMZz09

Stefano Ronchi (Würzburg)

Searching for duals of higher VB-groupoids

A VB-n-groupoid is an n-groupoid (as a simplicial object satisfying Kan conditions) in the category of vector bundles. It is known that VB-1-groupoids are in correspondence, up to non-canonical isomorphism, with 2-term representations up to homotopy of Lie groupoids. On one hand, this reduces to the classical Dold-Kan correspondence when restricting to representations of the point groupoid, and on the other, it can be generalized to a statement about higher VB-groupoids and representations up to homotopy of higher Lie groupoids.

In this talk I will show how this approach can help in defining dual objects for VB-n-groupoids, focusing on the case of $n = 2$, and the main difficulties that appear when passing from the $n = 1$-case to the $n = 2$-case. I will present a possible solution in the case of VB-2-groupoids over the point and provide motivation of why this search is worthwhile.

This is based on joint work with Miquel Cueca and Chenchang Zhu.

Invited by Madeleine Jotz Lean