

SEGAL-TYPE MODELS OF WEAK n -CATEGORIES

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The theory of higher categories is a very active area of research which has penetrated diverse fields of science. Different approaches to higher categories have been developed over the years. In this talk I present a new approach to working with higher categories: this is based on n -fold categories as well as on a new paradigm to weaken higher categorical structures, which is the idea of weak globularity. I will illustrate how the new model, called weakly globular n -fold categories, is suitably equivalent to a model of higher categories that has been studied in great depth, the one introduced by Tamsamani and further studied by Simpson. This comparison is achieved by developing a larger context of ‘Segal-type models of weak n -categories’, based on multi-simplicial structures, of which both the Tamsamani model and weakly globular n -fold categories are special cases.

REFERENCES

- [1] S. Paoli, *Simplicial Methods for Higher Categories: Segal-type models of weak n -categories*, Algebra and Applications, Springer (2019).

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