
NICK GURSKI, University of Sheffield

Semi-strictness via factorization

Gray-categories are the most studied semi-strict form of higher category, and the tensor product that defines them can be obtained from a factorization system on $\mathbf{2Cat}$. Finding an analogous tensor product on $\mathbf{GrayCat}$ turns out to be a very hard problem, but one can define a slightly weaker notion of semi-strict n -category inductively using the standard machinery of locally presentable categories together with Garner's approach to weak morphisms via cofibrant replacement. I will describe such an inductive definition, which is joint work with John Bourke.