A CATEGORICAL TAKE ON STEINER ω-CATEGORIES

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Strong Steiner ω-categories are a class of free (strict) ω-categories that admit algebraic models in the form of chain complexes, whose formalism allows for several explicit computations. The conditions defining strong Steiner ω-categories are traditionally expressed in terms of the associated chain complex, making them somewhat disconnected from the ω-categorical intuition. In this talk I will explain how to characterize this class as the class of polygraphs/computads satisfying a loop-freeness condition, without making explicit use of the associated chain complex and instead relying on the categorical features of ω-categories.

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