

# A first intermediate class with limit object

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(joint work with Jaroslav Nešetřil)

We introduce a unifying approach to structural limits, covering both Lovasz et al. left limit and Benjamini-Schramm limit. It is known that limit objects can be described, in these cases, either by a graphon or by a graphing. We define a new kind of measurable relational structure, called “modeling”, which generalizes graphings and might be a suitable limit object for sequences of sparse structures.

Answering a question of Lovasz, we explicitly construct a limit object (a limit modeling) for a class intermediate between dense graphs and graphs with bounded degrees, namely the class of graphs with bounded tree-depth.

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