

# Limits of Sequences of Combinatorial Structures

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## **Abstract**

We have developed a theory of convergence of permutation sequences along the lines of the work for graph sequences by Borgs, Chayes, Lovász, Szegedy, Sós and Vesztergombi. This leads to a description of the closure of the set of all permutations as a special class of Lebesgue measurable functions in  $[0, 1]^2$ , which, in analogy with the graph case, gives a model of random permutations and can be connected to property testing and parameter testing for permutations. In this talk, we shall discuss these results and recent developments concerning other combinatorial structures, such as posets with bounded dimension and ordered graphs.

This includes joint work with Bastos, Kohayakawa, Moreira, Ráth and Sampaio.