



SEMINARIUM MATEMATYKA DYSKRETNA

wtorek, 25 maja 2021 r., godz. 12:30, on-line

Formal languages and self-avoiding walks

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A self-avoiding walk in a graph is a walk which visits no vertex more than once. Determining the number c_n of self-avoiding walks starting at a given vertex is notoriously difficult; for instance, not even the exponential growth rate of the sequence c_n for the square lattice is known.

We discuss a connection between formal languages and walks on edge-labelled graphs which can be used to determine c_n for Cayley graphs of virtually free groups and various other graphs with a large-scale tree structure.

This talk is based on joint work with Lindorfer.