



SEMINARIUM MATEMATYKA DYSKRETNA

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ON THE INFINITE MOTION CONJECTURE

WILFRIED IMRICH

University of Leoben, Austria

The talk begins with a result from the diploma thesis of Julia Burghardt, AGH 2015. It is a simple coloring of the vertices of infinite, leafless trees with finite degrees that breaks all automorphisms. It uses two colors, and the density of one of the colors is zero.

Then it is shown that other classes of graphs also admit such colorings, and the Infinite Motion Conjecture of Tom Tucker from 2007 is presented. Despite many strong partial results the conjecture is still open.

The talk ends with the new result that the conjecture is true for connected infinite graphs where every vertex has degree at most 3. The coloring used is inspired by the one for leafless trees which which the talk started.