

Tytuł: **Partition regularity and topological dynamics**
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Recently Joel Moreira showed that any finite colouring of natural numbers admits a monochromatic configuration of the form $\{x, x + y, xy\}$, thereby (partially) solving a long-standing conjecture of Hindman. His proof proceeds by first translating the problem into the language of topological dynamics and then showing a relevant recurrence statement; an approach that goes back to Furstenberg and Weiss' dynamical proof of van der Waerden's theorem from 1978. During the talk we'll present a unified approach to partition regular theorems including van der Waerden's theorem, its polynomial extension obtained by Bergelson and Leibman and recent result of Moreira, highlight the role that ultrafilters play in partition regularity and offer some extension of Moreira's result.