

On arithmetic functions orthogonal to deterministic sequences

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The arithmetic Möbius function μ is believed to behave randomly. One way to express such a behaviour is the content of Sarnak's conjecture from 2010 on the Möbius disjointness from all deterministic sequences. In 2015 Veech formulated a (dynamical) property of the Möbius function itself and he conjectured that this property is equivalent to Sarnak's conjecture. My talk will be devoted to the strategy of the proof of Veech's conjecture and some consequences of this equivalence.

The talk is based on a joint work with Adam Kanigowski, Mariusz Lemańczyk and Thierry de la Rue.