



# The Furstenberg-Zimmer structure theorem revisited

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### Abstract

The Furstenberg-Zimmer theorem is a powerful structural result in ergodic theory with applications to number theory. It allows to rebuild a general measure-preserving system from a trivial one by basically performing only two different kinds of extensions. We propose a new approach to this structure theorem showing that it is, in essence, a consequence of operator theory on so-called Hilbert-Kaplansky modules. This is a joint work with Nikolai Edeko (Zurich) and Markus Haase (Kiel).

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