

Dynamics on the path space of generalized Bratteli diagrams

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Bratteli-Vershik models have been very successfully applied to the study of various dynamical systems, in particular, in Cantor dynamics. In this talk, we will consider discrete dynamical systems realized on the path space of *generalized Bratteli diagrams*. A generalized Bratteli diagram is a natural extension of the notion of a classical (standard) Bratteli diagram where each level has a countably infinite set of vertices. The structure of such diagrams is determined by a sequence of countably infinite incidence matrices. Generalized Bratteli diagrams form models for non-compact Borel dynamical systems. In the talk, we will consider some new results concerning generalized Bratteli diagrams. In particular, we will discuss the continuity of the Vershik map φ for a class of generalized ordered Bratteli diagrams, give examples of non-stationary diagrams which do not admit a full probability φ -invariant measure, and give examples of stationary generalized Bratteli diagrams “of non-bounded size” which possess full probability tail invariant measure. The talk is based on a joint work with Sergey Bezuglyi, Palle E.T. Jorgensen and Shrey Sanadhya. The work is supported by the NCN (National Science Center, Poland) Grant 2019/35/D/ST1/01375 and the program “Excellence initiative — research university” for the AGH University of Science and Technology.

(joint work with Sergey Bezuglyi, Palle E.T. Jorgensen, Shrey Sanadhya)