

Classification of sofic projective subdynamics of multidimensional shifts of finite type

Michael Schraudner

20/10/2009

Motivated by Hochman's general notion of subdynamics for \mathbb{Z}^d shifts we define *projective subdynamics* of \mathbb{Z}^d shifts of finite type (SFTs). Those are k -dimensional shifts, for some $k < d$, which can be seen inside a \mathbb{Z}^d SFT using projections onto lower dimensional lattices.

Restricting to one-dimensional projective subdynamics we present a complete classification of \mathbb{Z} sofic systems that can respectively can not be realized inside \mathbb{Z}^d SFTs. We show that not all \mathbb{Z} sofics appear and that there is a distinction between *stable* and *unstable projective subdynamics*.

The presented results were obtained in collaboration with Ronnie Pavlov.