

PARTIAL RIGIDITY ON $\mathcal{S}$ -ADIC SUBSHIFTS

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ABSTRACT. A system $(X, \mathcal{X}, \mu, T)$ is partially rigid if there is $\delta > 0$ and $(n_k)k \in \mathbb{N}$ such that $\liminf_{k \rightarrow \infty} \mu(A \cap T^{-n_k} A) \geq \delta \mu(A)$ for every $A \in \mathcal{X}$. The partial rigidity rate is the greatest possible $\delta > 0$.

In this talk, we first give very general criteria that capture and control partial rigidity. Starting from elementary tools like Kakutani-Rohklin towers, we derive several useful tools to study this phenomenon, especially for $\mathcal{S}$ -adic subshifts. By specializing the analysis further, we explain how to calculate the partial rigidity rate, focusing primarily on constant-length substitution subshifts. We then construct a system with multiple partial rigidity rates. We conclude with several open problems and further directions.

This talk is based on two papers, the main one being joint work with Alejandro Maass and Sebastián Donoso.

Date: June 30, 2025.

Key words and phrases. partial rigidity, $\mathcal{S}$ -adic subshifts.
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