# Recognizability for sequences of morphisms

**Abstract**

Let $T$ be a measure preserving or topological map acting on a space $X$. *Reccognizability* is a combinatorial notion that ensures the existence of a sequence of generating partitions of the space $X$ into towers, where the dynamics consists of moving up the tower. It is a notion that has proven very useful for substitution dynamical systems. In this talk we summarize how to extend this notion to S-adic dynamical systems, which are generalisations of substitution dynamical systems. We then discuss how to apply recognizability to finding the eigenvalues of S-adic dynamical systems.

This is based on two works, one with Valérie Berthé, Wolfgang Steiner and Jörg Thuswaldner, and the second with Valérie Berthé and Paulina Cecchi.