Sebastián TAPIA-GARCIA, TU Wien (Vienna)

"Recurrence and vectors escaping to infinity for Lipschitz operators"

In this talk we discuss about dynamical properties of linear operators that are obtained as the linearization of Lipschitz self-maps defined on a pointed metric space. These operators are known as Lipschitz operators. Precisely, for a Lipschitz operator $\widehat{f}$, we study the set of recurrent vectors and the set of vectors μ such that the sequence $(\|\widehat{f}^n(\mu)\|)_n$ goes to infinity. As a consequence, we show that there is no wild Lipschitz operator. We highlight the cases when the underlying metric space is a connected subset of $\mathbb{R}$ or a subset of $\mathbb{Z}^d$.