Algebra Seminar

Conjugacy and Centralizers in Groups of Piecewise Projective Homeomorphisms

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Time: 2:30 pm

Acesso à sala virtual:
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Abstract. Monod's group $H := H(\mathbb{R})$, introduced in (Monod, *Proc. Nat. Acad. Sci.* **110**(12), 2013, 4524–4527) is a group of piecewise projective orientation-preserving homeomorphisms of $\mathbb{R} \cup \{\infty\}$ which stabilize infinity and is another counterexample of the von Neumann-Day conjecture. The group H can also be regarded as homeomorphisms of $\mathbb{R}$ we say that an element $f \in H$ if there are finitely many points $t_1, t_2, \ldots, t_n$ such that on each interval $[t_i, t_{i+1}]$

$$f : t \to \frac{a_i t + b_i}{c_i t + d_i}, \text{ where } a_i d_i - b_i c_i = 1, \text{ for suitable } a_i, b_i, c_i, d_i \in \mathbb{R}$$

and $f : t \to \dfrac{a_0 t + b_0}{d_0}$ on $(-\infty, t_1]$ and $f : t \to \dfrac{a_n t + b_n}{d_n}$ on $[t_n, +\infty)$. Given a subring A of $\mathbb{R}$, the subgroup $H(A)$ of H consists of all elements which are piecewise in $PSL_2(A)$ with breakpoints in $\mathcal{P}_A$, the set of fixed points of hyperbolic elements of $PSL_2(A)$.

In this talk, we will present results about conjugacy and centralizers in H from a joint work with Francesco Matucci.