



UNIVERSIDADE DE ÉVORA
ESCOLA DE CIÊNCIAS E TECNOLOGIA
DEPARTAMENTO DE MATEMÁTICA



Centro de Investigação em Matemática e Aplicações
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Seminário

15/11/2023, CLAV Anf. 1, 14h30

Zoom address: <https://videoconf-colibri.zoom.us/j/91482878119>

Renormalization of Translated Cone Exchanges

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Abstract. Piecewise isometries are a natural generalisation of Interval Exchange Transformations which appear in the study of overflow oscillations in digital filters, dual billiards, mixing in granular systems, and kicked Hamiltonian systems. The inherent presence of discontinuities and lack of local expansion/contraction prevents the use of analysis to study these maps directly and restricts the range of possible behaviours, while making symbolic dynamics and renormalization natural avenues for investigation. In this talk, I will discuss renormalizability in a class of piecewise isometries known as Translated Cone Exchanges, which arises as a consequence of diophantine approximation.

Acknowledgements: This talk is partially supported by CIMA (Centro de Investigação em Matemática e Aplicações) through project UIDB/04674/2020 of FCT - Fundação para a Ciência e a Tecnologia, Portugal.

