

# Wild dynamics and periods for operators on Hilbert spaces

Alfred Peris

Workshop on Functional and Complex Analysis  
Universidad de Valladolid  
20-23, June, 2022

Since Sharkovsky's characterization in 1964 of possible periods for a continuous map on an interval, the study of periods that certain dynamical systems allow, depending on the structure of the phase space or the map, has attracted a lot of attention. We will present a complete characterization of all possible periods that a Devaney chaotic operator on the Hilbert space can present.

This is a joint work with J.A. Conejero, F. Martínez-Giménez and F. Rodenas.

## References

- [1] J.A. Conejero, F. Martínez-Giménez, A. Peris, and F. Rodenas, Sets of periods for chaotic linear operators, *Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales - Serie A: Matemáticas* **115(2)** (2021), Article number: 63.

aperis@upv.es

Institut Universitari de Matemàtica Pura i Aplicada  
Universitat Politècnica de València