



DEPARTAMENTO  
DE ANÁLISIS  
MATEMÁTICO Y  
MATEMÁTICA  
APLICADA



# COLLOQUIUM DE ANÁLISIS MATEMÁTICO

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ICMAT

## **A $z^k$ -invariant subspace without the wandering subspace property**

Abstract:

We study operators of multiplication by  $z^k$  in Dirichlet-type spaces  $D_\alpha$ . We establish the existence of  $k$  and  $\alpha$  for which some  $z^k$ -invariant subspaces of  $D_\alpha$  do not satisfy the wandering subspace property (WSP). As a consequence of the proof, any Dirichlet-type space accepts an equivalent norm under which the wandering property fails for some space for the operator of multiplication by  $z^k$  for any  $k \geq 6$ . Together with other results this will show that WSP is effectively dependent on the choice of equivalent norm given to the ambient space.

Organizado por el Departamento de Análisis Matemático y Matemática Aplicada y el Instituto de Matemática Interdisciplinar (IMI)

**Fecha: Viernes 22 de febrero de 2019**  
**a las 13:00 horas**  
**Lugar: Aula 222 (por confirmar)**  
**Facultad de CC Matemáticas, UCM**