



DEPARTAMENTO DE  
ANÁLISIS MATEMÁTICO Y  
MATEMÁTICA APLICADA



Instituto de  
Matemática  
Interdisciplinar

# SEMINARIO DE MATEMÁTICA APLICADA

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# Subharmonic solutions via the Poincaré-Birkhoff twist theorem, and beyond

### Abstract:

The Poincaré-Birkhoff fixed point theorem is a fixed point theorem for planar area-preserving homeomorphisms defined on an annular region. It was conjectured and proved in some special cases by Poincaré in 1912. In 1913 Birkhoff provided a first proof in the general case. For more than hundred years there have been attempts to improve and generalize the theorem as well as to provide corrected proofs to some delicate and not completely convincing variants of the main result. In the talk we survey the history of the theorem and present some main variants and applications for planar Hamiltonian systems with periodic coefficients

Organizado por el Instituto de Matemática Interdisciplinar (IMI)  
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**Fecha: Martes, 22 de enero de 2019**

**Hora: 12:00 horas**

**Lugar: Aula 209 (Seminario Alberto Dou)**

**Facultad de CC Matemáticas, UCM**