

# The spectral problem in Hilbert spaces of analytic functions

**Prof. Daniel Braak**  
Augsburg University (Germany)

**Abstract:** In the standard Hilbert space, the spectral problem of Hamilton operators with one degree of freedom takes the form of a lateral connection problem for functions with diverging (asymptotic) power series expansions. According to common lore, the solution would require to construct these functions on the whole real line which is usually impossible. It will be demonstrated that this brute-force approach can be avoided by employing Hilbert spaces of analytic functions.



**12:00**

**June 9, 2025**

**Seminario B118, Fac. Ciencias**



**Financiado por  
la Unión Europea**  
NextGenerationEU



**Plan de Recuperación,  
Transformación  
y Resiliencia**

**NOS  
IMPULSA**



**Junta de  
Castilla y León**