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Seminar of the  
**Complex and Hypercomplex Analysis Group (GACH)**

Sala Sousa Pinto, Departamento de Matemática  
Wednesday, 6 May 2026, 15h

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## The spectral problem for banded matrices

In this seminar, I present a recent result: a spectral theorem for banded operators with positive bidiagonal factorizations, extending the classical Favard–Stone spectral theorem for Jacobi matrices. The proof relies on the theory of oscillatory matrices, which possess well-established and convenient spectral properties. In addition, I introduce a generalization of the Gauss quadrature formula, providing an exact degree of precision for each of the measures involved.

This is a joint work with Amílcar Branquinho, University of Coimbra, and Manuel Mañas, University Complutense of Madrid.

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The GACH seminar is supported by CIDMA (<https://ror.org/05pm2mw36>) under the Portuguese Foundation for Science and Technology (FCT, <https://ror.org/00snfq58>), Grants UID/04106/2025 (<https://doi.org/10.54499/UID/04106/2025>) and UID/PRR/04106/2025.