

Fourier series of Sobolev polynomials for coherent pairs of Jacobi type**03.07****Judit Mínguez***(Universidad de La Rioja, Spain)***Time:** Tuesday 23.07., 11:30 - 12:00, Room HS 6

Abstract: The study of orthogonal polynomials with respect to a Sobolev-type inner product has attracted the interest of many researchers in the last years as we can see in [3]. In [1] and [2], the authors proved convergence and uniform boundedness of the partial sums in some cases for Gegenbauer-Sobolev and Jacobi-Sobolev polynomials. In this work, we are going to study Sobolev orthonormal polynomials for coherent pairs of measures of Jacobi type, in order to prove uniform boundedness and convergence for the partial sums. This is a joint work with O. Ciaurri.

- [1] O. Ciaurri, J. Mínguez Cenicerros, Fourier series of Gegenbauer Sobolev Polynomials *SIGMA* **14** (2018), 024, 11 pages.
- [2] O. Ciaurri, J. Mínguez Cenicerros, Fourier series of Jacobi-Sobolev polynomials, *Integral Transforms and Special Functions*.
<https://doi.org/10.1080/10652469.2018.1560279>.
- [3] F. Marcellán and Y. Xu, On Sobolev orthogonal polynomials, *Expo. Math.* **33** (2015), 308–352.