

Speaker 1

Title: Stieltjes' theorem for classical discrete orthogonal polynomials;

Speaker name: Alexandre Suzuki

Abstract: The purpose of this talk is to establish new tractable sufficient conditions for the monotonicity with respect to a real parameter of zeros of classical discrete orthogonal polynomials. This result allows one to carry out a systematic study of the monotonicity of zeros of classical orthogonal polynomials on linear, quadratic, q-linear, and q-quadratic grids. In particular, we analyze in a simple and unified way the monotonicity of the zeros of Hahn, Charlier, Krawtchouk, Meixner, Racah, dual Hahn, q-Meixner, quantum q-Krawtchouk, q-Krawtchouk, affine q-Krawtchouk, q-Charlier, Al-Salam-Carlitz, q-Hahn, little q-Jacobi, little q-Laguerre/Wall, q-Bessel, q-Racah, and dual q-Hahn polynomials. This is a joint work with K. Castillo and F. Rafaeli.

Speaker 2

Title: On some structure relations related with the Askey-Wilson operator

Speaker name: Dieudonne Mbouna

Abstract: In this talk we expose the theory of classical orthogonal polynomials on lattices and we use this to give a Al-Salam and Chihara type characterization of classical orthogonal polynomials. We also provide some structure relations involving the Askey-Wilson operator and some specific family of polynomials.

Speaker 3

Title: Monotonicity properties of zeros of classical orthogonal polynomials of a discrete variable;

Speaker name: Fernando Rodrigo Rafaeli

Abstract: The interlacing property between the zeros of consecutive Hahn polynomials was observed by Levit. It was proved independently, and almost simultaneously, by Mesztenyi that Levit's result is always true for discrete orthogonal polynomials on the linear grid. In this way, we prove a general result for classical discrete orthogonal polynomials. This is a joint work with K. Castillo and A. Suzuki.