Multiple orthogonal polynomials living on a star: ratio asymptotics and zero limiting distributions

05.10 **Ana Filipa Loureiro**
(*University of Kent, Canterbury, UK*)
Time: Tuesday 23.07., 11:00 - 11:30, Room HS 3

Abstract: At the centre of this talk are polynomials satisfying higher order recurrence relations with all recurrence coefficients, except the last one, equal to zero. The polynomials at issue are orthogonal with respect to a vector of measures, are rotational invariant and all the zeros lie on a star in the complex plane. The discussion will focus on their ratio asymptotic behaviour as well as the zero limit distribution. The emphasis is on those polynomials whose recurrence coefficients are unbounded, but such that after scaling become asymptotic periodic. The study is motivated and will be illustrated by examples of polynomials associated with confluent hypergeometric weight functions.

This is a joint work with Walter Van Assche.