

Speaker: Gregory Faye (Toulouse)

Title: Generalized Gaussian bounds for discrete convolution powers

Abstract: In this talk, I will present a new approach which allows to prove uniform generalized Gaussian bounds for the powers of discrete convolution operators in one space dimension. Such a bound is derived under the assumption that the Fourier transform of the coefficients of the convolution operator is a trigonometric rational function. We also allow the modulus of the Fourier transform to attain its maximum at finitely many points over a period. This generalizes previous results of Thomée'65, Diaconis & Saloff-Coste'14, and Randles & Saloff-Coste'15-17. This is joint work with Jean-François Coulombel.