Ben Gurion University – Mathematics

Algebraic Geometry and Number Theory Seminar

Speaker	**Ehud de Shalit (HU)**
Title	**Integral structures in p-adic representations**
Date	Wednesday, 22 March 2017
Time	15:10 – 16:30 (starts 15:10 sharp)
Location	Room -101 in Building 58

Abstract

Let F be a p-adic field and S the space of locally constant compactly supported C_p - valued functions on F, equipped with the sup norm.

Theorem: Every f in S can be decomposed as f_1 + f_2 where the sup norm of f_1 and the sup norm of the Fourier transform of f_2 are arbitrarily small.

This seemingly innocent theorem is surprisingly non-trivial. Its proof involves the formalism of q-binomial coefficients. (Joint work with Amit Ophir).

We shall also talk about the more general question of integral structures in p-adic representations, in relation to the p-adic local Langlands conjecture.

(updated 9 Mar 2017)