

Department of Mathematics, BGU

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# BGU Probability and Ergodic Theory (PET) seminar

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*On Tuesday, May ,8 2018*

*At 11:00 – 12:00*

*In 201*

Erez Nesharim (University of York)

will talk about

## **The t-adic Littlewood conjecture is false**

Abstract: The Littlewood and the p-adic Littlewood conjectures are famous open problems on the border between number theory and dynamics. In a joint work with Faustin Adiceam and Fred Lunnon we show that the analogue of the p-adic Littlewood conjecture over  $\mathbb{F}_3((1/t))$  is false. The counterexample is given by the Laurent series whose coefficients are the regular paper folding sequence, and the method of proof is by reduction to the non vanishing of certain Hankel determinants. The proof is computer assisted and it uses substitution tilings of  $\mathbb{Z}^2$  and a generalisation of Dodson's condensation algorithm for computing the determinant of any Hankel matrix.