

NODAL INTERSECTIONS OF RANDOM EIGENFUNCTIONS WITH A SEGMENT ON THE TORUS

RICCARDO WALTER MAFFUCCI

ABSTRACT. I will discuss nodal intersections of random eigenfunctions of the Laplacian on the (two dimensional) torus, and in particular the variance of the number of nodal intersections against a straight line.

The problem is of arithmetic flavour, and is closely related to the theory of lattice points on circles.

E PHD STUDENT, KING'S COLLEGE LONDON, REGNO UNITO

E-mail address: riccardo.maffucci@kcl.ac.uk