

Department of Mathematics, BGU

Colloquium

On *Tuesday, March ,5 2019*

At *14:30 – 15:30*

In *Math 101-*

Lev Buhovski (Tel Aviv University)

will talk about

Critical points of eigenfunctions

Abstract: On a closed Riemannian manifold, the Courant nodal domain theorem gives an upper bound on the number of nodal domains of n -th eigenfunction of the Laplacian. In contrast to that, there does not exist such bound on the number of isolated critical points of an eigenfunction. I will try to sketch a proof of the existence of a Riemannian metric on the 2-dimensional torus, whose Laplacian has infinitely many eigenfunctions, each of which has infinitely many isolated critical points. Based on a joint work with A. Logunov and M. Sodin.