

Department of Mathematics, BGU

Operator Algebras

On Tuesday, November ,1 2016

At 16:00 – 17:00

In Math 101-

Magdalena Georgescu (BGU)

will talk about

An introduction to spectral flow

Abstract: Given a path of self-adjoint Fredholm operators, one can count the net number of eigenvalues which cross from negative to positive as one moves along the path. This number (an integer) is called the spectral flow. The idea of spectral flow can be generalized to semifinite von Neumann algebras by using the trace on the algebra to measure the change in the spectrum, and obtain a spectral flow which is a real number. In a different direction, the same idea can be applied to some paths of unbounded self-adjoint operators. The goal of this talk is to explain the formal definition of spectral flow, and give an overview of its connections to other ideas in mathematics.