

Contribution Title: RANDOM GRAPHS AND RANDOM MATRICES: IS
THE CONNECTION RANDOM?
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Invited speaker:
YRS seminar: YES

The purpose of the talk is to derive a family of trace formulae for regular graphs. These trace formulae relate the spectrum of the adjacency operator of a graph to the periodic walks on the graph. As a special case, we get the Kesten-McKay measure, which is the limiting distribution of large regular graphs. In addition, we get an oscillatory part which is used to study the spectral fluctuations of regular graphs. We show a connection between these spectral fluctuations and the ones predicted by Random Matrix Theory. This is a joint work with Amit Godel and Uzy Smilansky.