**Non-generic weak transfer via the generalized doubling method and the Converse Theorem.**

Eyal Kaplan, Bar Ilan University.

In this talk I will discuss the generalized doubling method, focusing on its recent application to the weak transfer of automorphic representations from classical groups to general linear groups. I will briefly review the method of the Converse Theorem, the global integral representation, the definition of the local gamma factor and its fundamental properties. Then, I will present a new local device
which was used for the analytic aspects of the weak transfer.
The talk is based on several joint works with Cai, Friedberg, Ginzburg and Gourevitch.

**Ramification of weak Arthur packets for p-adic groups.**

Maxim Gurevich, Technion.

Arthur packets are collections of representations of p-adic groups that naturally occur when decomposing the group’s automorphic spectrum. Yet, their role in the local theory is far from clear.
With Emile Okada, we investigate a concept of weak Arthur packets for split classical groups, characterized entirely through microlocal invariants. This framework is designed to parallel the Adams-Barbasch-Vogan approach to analogous notions for Lie groups.
One key finding revealed a curious structure: Weak Arthur packets comprise precisely the unions of those ‘automorphic' Arthur packets that are 'weakly unramified' in a suitable sense.

**Martingale central limit theorems for weighted sums of random multiplicative functions.**

Ofir Gorodetsky, Oxford.

A random multiplicative function is a multiplicative function alpha(n) such that its values on primes, (alpha(p))_(p=2,3,5,...), are i.i.d. random variables.
The simplest example is the Steinhaus function, which is a completely multiplicative function with alpha(p) uniformly distributed on the unit circle. A basic question in the field is finding the limiting distribution of the (normalized) sum of alpha(n) from n=1 to n=x, possibly restricted to a subset of integers of interest. This question is currently resolved only in a few cases.
We shall describe recent work where we are able to find the limiting distribution in many new instances of interest. The distribution we find is non-gaussian, in contrast to all previous works.
This is joint work with Mo Dick Wong (Durham University).

**Distinction of the Steinberg representation with respect to symmetric subgroups.**

Guy Shtotland, Ben Gurion University.

We study the distinction of the Steinberg representation of a split $p$ adic group $G$ with respect to a split symmetric subgroup $H \subset G$. We relate this problem to the problem of determining the existence of a harmonic function on a certain hyper graph related to $X = G/H$. We show that the Steinberg representation is $H$ distinguished only if $X$ is quasi-split and that $GL_{2n+1}/GL_n \times GL_{n+1}$ is essentially the only example where $X$ is quasi-split but the Steinberg representation isn't $H$ distinguished. We confirm the relative local Langlands conjecture for the Steinberg representation by showing that the Steinberg representation is $H$ distinguished if and only if its parameter factors through the dual group of $X$, $G_X^\vee \subset G^\vee$.