Boğaziçi
MATH COLLOQUIUM

The Voronoi formula and double Dirichlet series

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Abstract: A Voronoi formula is an identity where on one side, there is a weighted sum of Fourier coefficients of an automorphic form twisted by additive characters, and on the other side one has a dual sum where the twist is perhaps by more complicated exponential sums. It is a very versatile tool in analytic studies of L-functions. In joint work with Fan Zhou we come up with a proof of the identity for L-functions of degree N. The proof involves an identity of a double Dirichlet series which in turn yields the desired equality for a single Dirichlet coefficient. The proof is robust and applies to L-functions which are not yet proven to come from automorphic forms, such as Rankin-Selberg L-functions. The first two thirds of my talk should be accessible to a general audience.

Date : Wednesday, December 30, 2015
Time: 14:00
Place: TB 250, Boğaziçi University