

Philadelphia Area Number Theory Seminar

Djordje Milićević
Bryn Mawr College

Non-vanishing of L -functions in Galois orbits

Abstract: Central values of L -functions are of fundamental importance in number theory. In particular, a host of results and conjectures including the Riemann Hypothesis and the Birch/Swinnerton-Dyer Conjecture predict that the central values of L -functions (or their derivatives, as appropriate for root number reasons) hold key arithmetic information and should vanish only when there are deep arithmetic reasons for them to do so and that this should be an exceptional occurrence in suitably generic families. This gives rise to the problem of establishing non-vanishing in various families of L -functions, which can be approached from the algebraic, analytic, or both viewpoints.

This talk will begin with a non-technical overview of the techniques used to establish non-vanishing in analytic number theory. I will then discuss recent joint work with Khan and Ngo on non-vanishing of central values of L -functions in Galois orbits.

Wednesday, April 29, 2015
2:40–4:00PM

Bryn Mawr College
Department of Mathematics
Park Science Center **328**

Tea and refreshments at 2:20PM in Park 355