

## **ABSTRACT:**

Epstein zeta functions attached to positive definite binary quadratic forms provide the simplest example of Dirichlet series with a functional equation of  $GL(2)$ -type. This lecture is a survey of recent progress in the purely analytical problem of understanding the distribution of zeros of these functions. This includes some unpublished work with Julia Mueller dealing with the special case in which the quadratic form is associated to an imaginary quadratic field of class number 2, in particular the quadratic forms  $x^2 + 5y^2$  and  $2x^2 + 2xy + 3y^2$ .