

# Philadelphia Area Number Theory Seminar

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## $L$ -functions, Fourier Coefficients, and Eisenstein Series

**Abstract:** The analytic properties of  $L$ -functions often have arithmetic content. One can study some of these analytic properties by expressing the  $L$ -function as an integral of automorphic forms. This approach is known as the Rankin-Selberg method. We will begin by studying the classical nonholomorphic Eisenstein series and the  $GL(2) \times GL(2)$  Rankin-Selberg method. This will establish a template for us to follow as we consider similar questions on the double cover of  $GL(2)$  (the group on which the theta function lives) and  $GL(3)$ . Finally I will discuss some of my work on determining the Fourier coefficients of an Eisenstein series on the double cover of  $GL(3; \mathbf{R})$  and how this relates to our template.

Wednesday, September 28, 2016  
3:10{4:30PM

Bryn Mawr College  
Department of Mathematics  
Park Science Center 328

Tea and refreshments at 2:50PM in Park 355