

# Philadelphia Area Number Theory Seminar

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## The Connection Between Modular Forms and Dirichlet Series

**Abstract:** The Mellin transform and its inverse establish a correspondence between certain exponential series and (completed) Dirichlet series. When the exponential series is a modular form, then the Dirichlet series actually has a functional equation. However, not all Dirichlet series with a functional equation correspond to a modular form. Additional conditions on the Dirichlet series are required, and any theorem that gives such conditions is known as a converse theorem. In this talk, I'll give the necessary background and prove one such converse theorem due to Weil.

Wednesday, June 29, 2016  
2:40{4:00PM

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

Tea and refreshments at 2:20PM in Park 355