

# 2013年度 第15回の整数論セミナー (臨時講演会)

日時：2013年8月2日(金) 16:30~18:00

場所：〒169-8555 東京都新宿区大久保3-4-1  
早稲田大学西早稲田キャンパス (旧・大久保キャンパス)  
61号館4階413室 (61-413)

講演者：Yifan Yang (台湾国立交通大学)

タイトル：Special values of hypergeometric functions and periods of CM elliptic curves

アブストラクト：

It is well-known that if a modular form of weight  $k$  on a congruence subgroup of  $SL(2, \mathbb{Z})$  has algebraic Fourier coefficients, then its values at CM-points are algebraic multiples of certain numbers related to periods of CM elliptic curves over  $\overline{\mathbb{Q}}$ .

In this talk, we will consider the case of modular forms on Shimura curves.

By realizing modular forms on Shimura curves in two ways, firstly in terms of solutions of Schwarzian differential equations and secondly as Borcherds forms, and using Schofer's formula for values of Borcherds forms at CM-points, we obtain formulas for values of certain hypergeometric functions at special points in terms of periods of CM elliptic curves.