NCTS
National Center for Theoretical Sciences

2016 NCTS
Short Course on
Number Theory

Time: August 2-4, 9-11 (Thu.)-(Thu.)
2016 10:00-12:00, 13:00-15:30

Venue: 734R, The General 3rd Building, National Tsing Hua University
Speakers: Prof. Chieh-Yu Chang (National Tsing Hua University)
Prof. Fu-Tsun Wei   (National Central University)

Topic I

Local class field theory
-Formal groups
-Constructions of maximal abelian extensions of p-adic local fields
-The reciprocity map and the existence theorem

Topic II

Tate's thesis
-Characters and measures
-Local zeta-functions and functional equations
-Analytic continuation and functional equation of the global zeta-function
-Comparison with class field theory

References:
1. Jonathan Lubin and John Tate, Formal complex multiplication in local fields. Ann. of Math. (2) 81 1965 380—387.
2. Dinakar Ramakrishnan and Robert J. Valenza, Fourier analysis on number fields, GTM 186
3. J. W. S. Cassels and A. **Fröhlich**, Algebraic Number Theory, LMS

We will introduce Fourier analysis on adeles and employ a reformulation of Grossencharacters on ideles, and then give an elegant proof of Hecke's work following Tate. Nowadays, Tate's work is generally realized as study of automorphic forms for GL(1). This short course provides a thorough treatment following Tate's approaches. Before introducing Tate's work, we need to introduce some background on class field theory. We will give more details on local class field theory, and then give the structural theorems on global class field theory. Finally we will give the connection between them.

報名網址：**https://goo.gl/WBMWC7**
報名截止：**7/25 (Mon.)**
聯 絡 人：孫小姐 **sunug@math.cts.nthu.edu.tw, 03-5745254**

網頁資訊：**http://goo.gl/bQBbf6**