

# CURRENT DEVELOPMENTS AND DIRECTIONS IN THE LANGLANDS PROGRAM

## CONFERENCE SCHEDULE

All talks are one hour long. Light breakfast food and beverages will be supplied before the first talk and between the morning talks. Afternoon tea will be supplied between the afternoon talks. Please note that on *Monday afternoon*, the talks begin at *2:00 pm*. On every other afternoon, the talks begin at *2:30 pm*. There will be a cocktail reception at the Orrington Hotel from *6:00 – 8:00* on Sunday evening.

On Saturday and Sunday, the talks will be held in room LR2 in the Technological Institute (Tech) building on Northwestern's campus.

On Monday and Wednesday, and on Tuesday afternoon, the talks will be held in the Community Meeting Room of the Evanston Public Library.

On Tuesday morning, the talks will be held in Room 202 of the Norris University Center on Northwestern's campus.

### **Saturday, May 10 (Tech LR2)**

*9:30 am*

Benedict Gross (Harvard University)  
Langlands parameters and Tate local duality

*11:00 am*

David Nadler (Northwestern University)  
Some aspects of the geometric Langlands program

*2:30 pm*

Jacob Lurie (Massachusetts Institute of Technology)  
Geometric Langlands and quantum groups

*4:00 pm*

Mark Kisin (University of Chicago)  
Shimura varieties mod  $p$

### **Sunday, May 11 (Tech LR2)**

*9:30 am*

James Arthur (University of Toronto)  
On the endoscopic classification of representations

*11:00 am*

Haruzo Hida (University of California, Los Angeles)  
Permutation representations and Langlands base change

*2:30 pm*

David Nadler (Northwestern University)  
Geometric base change

*4:00 pm*

Wee Teck Gan (University of California, San Diego)  
Langlands' Eisenstein series and multiplicity of automorphic forms

*6:00 – 8:00 pm*

Cocktail Reception at the Orrington Hotel (on the 2nd floor, in the Heritage Ballroom)

**Monday, May 12 (Evanston Public Library)**

*9:30 am*

Freydoon Shahidi (Purdue University)  
Some applications of functoriality

*11:00 am*

Edward Frenkel (University of California, Berkeley)  
Geometric Langlands correspondence and mirror symmetry

*2:00 pm*

Toby Gee (Northwestern University)  
The conjectural connections between automorphic representations and Galois representations

*3:30 pm*

Informal talk on the structure of spaces of automorphic forms,  
to be led by James Arthur (University of Toronto)

**Tuesday, May 13 (AM: Norris 202 / PM: Evanston Public Library)**

*9:30 am*

Frank Calegari (Northwestern University)  
Speculations about the cohomology of arithmetic groups

*11:00 am*

Ngo Bao Chau (Institute for Advanced Study)  
Fundamental lemma and Hitchin fibration

*2:30 pm*

Sug Woo Shin (Institute for Advanced Study)  
Galois representations arising from some Shimura varieties

*4:00 pm*

Jordan Ellenberg (University of Wisconsin)  
Stable cohomology of moduli spaces and analytic number theory

**Wednesday, May 14 (Evanston Public Library)**

*9:30 am*

Matthew Emerton (Northwestern University)

An introduction to the  $p$ -adic Langlands program

*11:00 am*

Mitya Boyarchenko and Vladimir Drinfeld (University of Chicago)

Character sheaves on unipotent groups in characteristic  $p > 0$