

**Teichmüller Theory**  
**Seminar and Lecture Series**  
**Week 4: March 4 - 7, 2013**

**Organized by: Louis Funar, Yuriy Neretin, Athanase Papadopoulos and Bob Penner**

• **Monday, March 4**

**10:00 – 11:00** Lizhen Ji

*A tale of two groups: arithmetic groups and mapping class groups, III*

Abstract: In geometric group theory, several special classes of groups have been extensively and intensively studied. They are interesting both for their own interests and beauty, and also for motivations and guides which they provide for more general groups. In this series of three lectures, I will discuss some properties of arithmetic groups and mapping class groups, and explain how analogies between them suggest problems and also motivate results for other groups such as the outer automorphism groups of free groups.

• **Tuesday, March 5**

**10:00 – 11:00** Lizhen Ji

*A tale of two groups: arithmetic groups and mapping class groups, IV*

**11:00 – 12:00** Sumio Yamada

*An Introduction to Geometric Analysis of Teichmüller spaces I*

Abstract: We offer an introductory course on the differential geometric approach to the Teichmüller theory, contrasting the more orthodox approaches using complex analysis and differential topology. In particular, an emphasis is put on methods using calculus of variations, which in turn are shown to be compatible with the hyperbolic geometry of Riemann surfaces.

• **Wednesday, March 6**

**10:00 – 11:00** Sumio Yamada

*An Introduction to Geometric Analysis of Teichmüller spaces, II*

**11:00 – 12:00** Sumio Yamada

*An Introduction to Geometric Analysis of Teichmüller spaces, III*

• **Thursday, March 7**

**10:00 – 11:00** Sumio Yamada

*An Introduction to Geometric Analysis of Teichmüller spaces, IV*

**11:00 – 12:00** Sumio Yamada

*An Introduction to Geometric Analysis of Teichmüller spaces, V*

**All lectures take place at the ESI Boltzmann Lecture Hall**