

# SCMS Seminar



## **AUTOMORPHIC PERIODS, MOTIVIC PERIODS AND CRITICAL VALUES OF AUTOMORPHIC L-FUNCTIONS**

**Dr. Jie Lin**

**I.M.J. Paris**

**Time:** 2:00-3:00 pm., Thursday, August 20, 2015

**Venue:** Room 2201, East Main Guanghai Tower, Handan Campus

**Title:** Automorphic Periods, Motivic Periods and Critical Values of Automorphic L-functions

**Abstract:** Michael HARRIS defined the arithmetic automorphic periods for certain cuspidal representations of  $GL_n$  over quadratic imaginary fields in his Crelle paper 1997. He also showed that critical values of automorphic L-functions for  $GL_n * GL_1$  can be interpreted in terms of these arithmetic automorphic periods. These results have been generalized in two ways. Firstly, the arithmetic automorphic periods have been defined over general CM fields. Secondly, we show that special values of automorphic periods for  $GL_n * GL_n$  can be interpreted in terms of these automorphic periods in many situations. Our result is compatible with Deligne's conjecture for motives