# SCMS Seminar

## ARTIN'S CONJECTURE FOR ABELIAN VARIETIES

**Speaker: Prof. Cristian Virdol**

**Yonsei University**

**Lecture 1**
**Time:** 2:00-3:00 pm, Monday, June 12, 2017
**Lecture 2**
**Time:** 2:00-3:00 pm, Thursday, June 15, 2017
**Lecture 3**
**Time:** 2:00-3:00 pm, Wednesday, June 21, 2017
**Lecture 4**
**Time:** 2:00-3:00 pm, Thursday, June 22, 2017

**Venue:** Room 2201, East Guanghua Tower (Main), Fudan University

**Abstract:** Artin's primitive root conjecture (1927) states that, for any integer $a\neq\pm1$ or a perfect square, there are infinitely many primes $p$ for which $a$ is a primitive root (mod $p$). This conjecture is not known for any specific $a$. I will prove the equivalent of this conjecture unconditionally for general abelian varieties for all $a$. Moreover, under GRH, I will prove the strong form of Artin's conjecture (1927) for abelian varieties, i.e. I will prove the density and the asymptotic formula for the primitive primes.

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