

# SCMS Seminar



## INVARIANT THEORY

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### Lecture

**Time:** 15:00-16:00, Tuesday, Nov 20th

**Venue:** Room 2001, East Guanghua Tower (Main), Fudan University

**Abstract:** We give a survey on invariant theory of finite group actions on polynomial rings, from classical results of Gauss, Hilbert, Noether, Shephard, Todd, Chevalley to modern approaches of Stanley, Watanabe, Auslander and Steinberg using homological algebra, algebraic geometry and combinatorics. We will briefly introduce noncommutative invariant theory, based on some recent work of Jorgensen, Jing, Kirkman, Kuzmanovich, Bao, He, Qin. If time permits, we will also propose some open questions and future directions.