

**Speaker:** Kaiming Zhao (Wilfrid Laurier University, Waterloo, Canada)

**Title:** Simple modules over Witt algebras  $W_d$

**Abstract:** Let  $W_d$  be the Witt algebra, that is, the derivation Lie algebra of the Laurent polynomial algebra  $A_d = \mathbb{C}[x_1^{\pm 1}, x_2^{\pm 1}, \dots, x_d^{\pm 1}]$ . Let  $H$  be the Cartan subalgebra of  $W_d$ . All simple  $W_d$ -modules that are  $U(H)$ -free modules of finite rank will be given.