

# ISU Algebra Seminar



**Date:** October 10th, 2019

**Time:** 1:00pm-1:50pm

**Location:** STV 347B

**Speaker:** Gaywalee Yamskulna

Department of Mathematics, ISU

**Talk Title:** On Structure of  $\mathbb{N}$ -graded Vertex Algebras

**Abstract:** In this talk, I will discuss about the study of  $\mathbb{N}$ -graded vertex algebra  $V = V_{(0)} + V_{(1)} + \cdots$  such that the dimension of  $V_{(0)}$  is greater than one. In particular, I will explore many hidden algebraic structures inside  $V_{(0)}$  and  $V_{(1)}$ . Later on, I will examine the algebraic structure of  $\mathbb{N}$ -graded vertex algebras  $V$  when the Leibniz algebra  $V_{(1)}$  has  $sl_2$  as its Levi factor.