



DEPARTMENT OF  
MATHEMATICS  
*Illinois State University*

## Undergraduate Colloquium

**Title:** "Black Holes" in Mathematics

**Speaker:** Wenhua Zhao

**Location:** STV 347B

**Time:** 1:00 pm - 1:50 pm on Thursday (10/31/2019)

**Abstract:** In this talk we discuss some phenomena of "black holes" in mathematics. More precisely, we discuss the Collatz Conjecture on Collatz sequences; the ideals and Mathieu subspaces of rings. If time permits, we also discuss some relations of Mathieu subspaces with the well-known Jacobian conjecture. The talk will be introductory and accessible to general audience. (This is joint work with Arno van den Essen.)

