

# ISU ALGEBRA SEMINAR



## SPRING 2018 SCHEDULE

Thursdays, 1:00 PM-1:50 PM at STV 352

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**Date: February 22, 2018**

**Speaker: Professor Sunil Chebolu**

**Talk Title: An overview of Fuchs' problem.**

**Abstract:** I will present an overview of my joint work with Keir Lockridge on a problem posed by Laszlo Fuchs. More than 50 years ago, Fuchs asked which abelian groups can be the group of units of a commutative ring? Though progress has been made, the question remains open. We answered this question for various classes of groups including indecomposable abelian groups, dihedral groups, quaternion groups and the general class of  $p$ -groups with a cyclic subgroup of index  $p$ . This work also gave us several new characterizations of Mersenne primes and Fermat primes.