

ISU Algebra Seminar



Title: Some Results on Mathieu Subspaces of Matrix Rings

Speaker: George Seelinger

Location: STV 310

Time: Noon- 12:50 pm on Thursday (02/27/20)

Abstract:

Let F be an algebraically closed field and let $M_n(F)$ be the ring of $n \times n$ matrices with entries in F . In 2010, Wenhua Zhao introduced the concept of a Mathieu subspace that generalizes the concept of an ideal in a ring. In this context of $M_n(F)$, the Mathieu subspaces of $M_n(F)$ are the subspaces of $M_n(F)$ that do not contain any nonzero idempotents. In this talk we describe a family of maximal Mathieu subspaces of $M_n(F)$. We will focus on examples of these Mathieu subspaces in $M_2(F)$ and $M_3(F)$,

This is joint work with Wenhua Zhao.