

## FISK SPEAKER SERIES 2023



Thursday, April 20th- 4:00-5:00 pm AG 1030  
Reception at 3:30 pm RH 261

**Dr. Gene Abrams**

University of Colorado, Colorado Springs



### Morita equivalence for graded rings

The classical Morita Theorem for rings established the equivalence of three statements, involving categorical equivalences, isomorphisms between corners of finite matrix rings, and bimodule homomorphisms. A fourth equivalent statement (established later) involves an isomorphism between infinite matrix rings. I'll spend the first part of this talk describing the ideas involved, and some of the history of the classical Morita Theorem.

I will then describe our two main results, in which we establish the equivalence of analogous statements involving two types of graded categorical equivalences, graded isomorphisms between corners of finite matrix rings, graded bimodule homomorphisms, and graded isomorphisms between infinite matrix rings.

I will also describe some connections between these results and results about  $C^*$ -algebras.

Only a basic level of ring theory background will be assumed.