Irreducible homomorphisms to/from free modules

Saeed Nasseh

Abstract. Let R be a commutative local ring. A homomorphism $f\colon M \to N$ of finitely generated R-modules is called *irreducible* if f is neither a split monomorphism nor a split epimorphism, and for every factorization $M \xrightarrow{g} L \xrightarrow{h} N$ of f we have g is a split monomorphism or h is a split epimorphism.

In this talk, we investigate the structure of irreducible monomorphisms to and irreducible epimorphisms from finitely generated free modules over a local ring.

This talk is based on a joint work with Ryo Takahashi.

Thick subcategories of the singularity category of certain local rings

Saeed Nasseh

Abstract. The maximal ideal of a local ring is called *quasi-decomposable* if its quotient by some regular sequence is decomposable. In this talk, we give a classification of the thick subcategories of the singularity category of certain local rings with quasi-decomposable maximal ideal.

This talk is based on a joint work with Ryo Takahashi.

Fiber products of finite Cohen-Macaulay type

Saeed Nasseh

Abstract. In this talk, we give a characterization of (Cohen-Macaulay) fiber product rings with finite Cohen-Macaulay type.

This talk is based on a joint work with Sean Sather-Wagstaff, Ryo Takahashi, and Keller VandeBogert.