ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

INVITATION TO THE DOCTORAL SEMINAR

Some problems on factorization of matrices and a new way to approach them

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ABSTRACT

In the second half of the 1960s, Erdos proved that every singular matrix over a field is a product of idempotent matrices. Since then, characterizing integral domains that satisfy the same property has become a widely explored problem in ring theory. Interestingly, this problem is connected to other significant open questions, such as the categorization of integral domains whose general linear groups are generated by elementary matrices and those satisfying variations of the Euclidean algorithm. In this seminar, we will give an informal overview of classical results regarding the idempotent factorization of matrices, alongside recent advancements in the field. In particular, we will briefly introduce a novel approach to matrix factorization rooted in factorization theory.

We hope to see you there!