Universität Stuttgart

**Fakultät Mathematik Physik**

**Universität Stuttgart • Pfaffenwaldring 57 • 70569 Stuttgart**
Fakultät Mathematik Physik

**Dekan**
Prof. Dr. Ingo Steinwart

# Einladung

zur öffentlichen Antrittsvorlesung

## von Herrn Privatdozent Dr. Frederik Marks

am **Montag, 06. Februar 2023 um 16:30 Uhr,**
im Fakultätssaal 8.122, Pfaffenwaldring 57, Universität Stuttgart

zum Thema „**Rank functions for modules and categories**"

Abstract: The dimension of a vector space is an important numerical invariant given by the cardinality of a basis over the ground field. When passing to modules, bases over the ground ring do not necessarily exist anymore and a different approach is needed to define the rank of a module. Motivated by work of Cohn and Schofield, we will introduce Sylvester rank functions and discuss their interplay with homomorphisms into skew-fields. In the second part of the talk, we will take these ideas to the general context of triangulated categories, following work by Chuang and Lazarev. We will ask which structural information on the given category is captured by rank functions, and will report on some recent progress made in joint work with Teresa Conde, Mikhail Gorsky and Alexandra Zvonareva.

Hierzu laden wir sehr herzlich ein.

gez. Prof. Dr. Ingo Steinwart (Dekan)

mathematik
physik fakultät