



## Kolloquium über Reine Mathematik

Einladung zu einem Vortrag

**Dienstag, 24. Juni 2025**

17 Uhr, Geom H4

Prof. Marcus Zibrowius  
(Universität Düsseldorf)

Title:

Vector bundles from group representations

Abstract:

A vector bundle is a geometrically organized family of vector spaces. I will endeavour to give a broadly accessible introduction to a particular construction of such bundles out of representations of (Lie) groups, which can be traced back to early work of Atiyah and Hirzebruch. A classical result asserts that, over certain homogeneous spaces, essentially all vector bundles can be obtained from this single construction. I will illustrate this result with a range of examples, including spaces dear to both differential and algebraic geometers. Finally, I will explain a recent extension to a larger class of spaces known as biquotients.

**Vor dem Vortrag (ab 16.30 Uhr) stehen im Foyer vor Hörsaal H4  
Kaffee und Tee bereit.**