

Title: Monoidal highest weight envelopes

Speaker: Jonathan Gruber (Universität Bonn)

Abstract: In the study of monoidal categories, one often tries to understand whether a given additive monoidal category can be embedded canonically into an abelian monoidal category. In a surprising number of examples (arising e.g. from Deligne's interpolation categories), the abelian category in question admits a highest weight structure (in the sense of Cline-Parshall-Scott), and the additive category identifies with the subcategory of tilting objects. In this talk, I will explain a general construction that realizes a large class of additive monoidal categories (including many interpolation categories) as subcategories of tilting objects in monoidal highest weight categories.

This is based on joint work with Johannes Flake.