Seminarankündigung

Deformationsquantisierung

Am 14. 12. 2018 spricht um 14 Uhr c.t.

Seminarraum SE 31

Tobias Schmude (JMU Würzburg)

Idempotent Completion of Categories and Application to the Theorem of Serre-Swan

In many categories, idempotent endomorphims split, i.e. can be written as the composition of a section with a corresponding retraction. For any category that does not allow this for all idempotents, we construct a universal embedding into a category that does so, called an idempotent completion. For any topological space $X$, we can realize the category $\text{Vect}_X$ of vector bundles over $X$ and the category $\text{Proj}_{\mathbb{C}(M)}$ of projective modules over the continuous functions on $X$ as idempotent completions of easier categories. This yields a conceptual proof of the theorem of Serre-Swan via the universal property of idempotent completions, showing that for many topological spaces $X$ the section functor $\Gamma$ is an equivalence of the above categories.

gez. Stefan Waldmann