The idea of categorification and applications to knot theory

Abstract:
The idea of categorification goes back to Crane and Frenkel and is nowadays relevant in many areas of mathematics. This talk is meant to give an idea what categorification means and why it might be something interesting to study. We will illustrate the concept using representations of Lie algebras. We want to show how the concept can be applied to the theory of knot invariants. Finally we would like to indicate how one can deduce equivalences of categories from the general theory.

Prof. Dr. Catharina Stroppel (Universität Bonn)