

Oberseminar Topologie: 15.12.2021

Allen Yuan (Columbia University)

„Examples of chromatic redshift and related phenomena“

Abstract:

One form of the Ausoni-Rognes chromatic redshift philosophy is that algebraic K-theory raises the chromatic complexity of a ring by one. Work of Clausen-Mathew-Naumann-Noel shows, in particular, that K-theory raises height by at most one; on the other hand, recent work of Hahn-Wilson gives an example at each height (a form of $BP\langle n \rangle$) where this height shifting does occur. In this talk, I will discuss a simple non-computational proof of this height shifting in a range of examples, including Lubin-Tate theories and the iterated K-theory of fields. Following this, I will report on work in progress, joint with Robert Burklund and Tomer Schlank, which works toward establishing height shifting for all $K(n)$ -local E-infinity ring spectra.