Oberseminar Topologie: 10.05.2023

Ryomei Iwasa (CNRS Paris)

Title: P^1-stable homotopy theory and algebraic K-theory

Abstract: As S^1-spectra are crucial for studying cohomology theories on topological spaces, the theory of P^1-spectra plays an important role in studying cohomology theories on schemes. Voevodsky employed it in combination with his A^1-homotopy theory, but actually P^1-spectra behave well without A^1-invariance, so that non-A^1-invariant cohomology theories such as algebraic K-theory and prismatic cohomology are representable as P^1-spectra. In this talk, we focus on algebraic K-theory and Selmer K-theory, and I will explain how this P^1-spectra perspective is useful in studying them. In particular, I will explain Snaith type theorem for algebraic and Selmer K-theory. Based on joint work with Toni Annala and Marc Hoyois.