Speaker: Steffen Kionke **Title:** *p*-adic limits of Betti numbers.

Abstract: We show that Betti numbers in pro-p towers converge to a limit in the field of p-adic numbers. The limiting "p-adic Betti numbers" provide new invariants which are quite different from L^2 -Betti numbers. For instance, these Betti numbers can distinguish certain amenable groups, but they are equal for all free groups. We give an introduction to these invariants and mention open problems and applications.