Speaker: Holger Kammeyer **Title:** Profiniteness questions for L^2 -Betti numbers of S-arithmetic groups

Abstract: As a consequence of Lück's approximation theorem, the first L^2 -Betti number of a finitely generated residually finite group is determined by the profinite completion. We give examples of S-arithmetic groups illustrating that this result does not carry over to the *n*-th L^2 -Betti number for any n > 1. On the other hand, we show that the profinite completion of a higher rank S-arithmetic group with CSP determines the number field of definition up to arithmetical equivalence. As a consequence, we obtain profiniteness results for higher L^2 -Betti numbers of S-arithmetic groups in a more restrictive setting. Joint work with R. Sauer.