**Speaker:** Stefaan Vaes **Title:** Bernoulli actions of type III and  $L^2$ -cohomology.

**Abstract:** I present a joint work with Jonas Wahl proving the following result: in most cases, a countable group G admits a Bernoulli action of type III in the sense of Murray and von Neumann if and only if the first  $L^2$ -cohomology of G is nonzero. I also present numerous explicit examples of type  $III_1$  Bernoulli actions of the group of integers and of the free groups, with different degrees of ergodicity.