

Talk Title: Statistics of the Hasse norm principle

Abstract: Let L/K be an extension of number fields. The norm map $N_{L/K}: L^* \rightarrow K^*$ extends to a norm map from the ideles of L to those of K . The Hasse norm principle is said to hold for L/K if, for elements of K^* , being in the image of the idelic norm map is equivalent to being the norm of an element of L^* . I will begin with a survey of recent work studying the frequency of failure of the Hasse norm principle in families of number fields. In the latter part of my talk, I will discuss joint work with Ila Varma on the statistics of the Hasse norm principle in fields with normal closure having Galois group S_4 or S_5 .