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*Counting number fields and predicting asymptotics*

A guiding question in number theory, specifically in arithmetic statistics, is: Fix a degree  $n$  and a Galois group  $G$  in  $S_n$ . How does the count of number fields of degree  $n$  whose normal closure has Galois group  $G$  grow as their discriminants tend to infinity? In this talk, we will discuss the history of this question and take a closer look at the story in the case that  $n = 4$ , i.e. the counts of quartic fields.