

Meeting: 1003, Atlanta, Georgia, BLUMENTHAL, Blumenthal Session

1003-11-1726 **Manjul Bhargava***, Princeton University. *Counting field extensions of the rational numbers.*
“Number fields” - i.e., finite extensions of the rational numbers - are perhaps the most fundamental objects in algebraic number theory. Yet, amazingly, we have almost no idea how to systematically enumerate them, or even describe their distribution asymptotically with respect to basic invariants. The only general guess on their distribution is an old and simple (but very elusive!) conjecture of Linnik. In this talk, we will state Linnik’s conjecture, and present some old and new results that now allow for a proof in the case of number fields of degree up to five. (Received October 27, 2004)