

MATEMATISKA INSTITUTIONEN
STOCKHOLMS UNIVERSITET
Avd. Matematik

SJÄLVSTÄNDIGT ARBETE I MATEMATIK

Onsdagen den 30 september kl. 11:00-12:00 presenterar Erland Arctaediuss sitt arbete "Search for function fields with many rational places" (15 högskolepoäng, grundnivå).

Handledare: Karl Rökæus

Plats: Sal 32, hus 5, Kräftriket

Sammanfattning: We will give a short introduction to function fields, aimed at providing us with tools to compute L -polynomials of hyperelliptic function fields. We use these tools to conclude the existence of extensions of these function fields for which we can both provide a lower limit on their number of rational places and compute their genus. Using these techniques we write a program in Java aimed at searching for function fields with a large number of rational places with respect to its genus. Finally we present the results of running the program over various small finite fields and genera.

Alla intresserade är välkomna!