

MATEMATISKA INSTITUTIONEN
STOCKHOLMS UNIVERSITET
Avd. Matematik

SJÄLVSTÄNDIGT ARBETE I MATEMATIK

Fredagen den 8 april kl. 10:00-11:00 presenterar Daniel Lännström sitt arbete “Finding rational torsion points on hyperelliptic curves with an application to point counting on a moduli space” (30 högskolepoäng, avancerad nivå).

Handledare: Jonas Bergström

Plats: Sal 34, hus 5, Kräftriket

Sammanfattning: For elliptic curves it is well-known that the zeroes of the division polynomials characterize the torsion points. Here we will instead consider hyperelliptic curves and present algorithms for finding the rational torsion points. We focus mainly on hyperelliptic curves defined over finite fields of genus 2.

As an application we will compute the number of F_q -rational points on the moduli space of hyperelliptic curves of genus 2 with marked Weierstrass point and level N structure.

Alla intresserade är välkomna!