MATEMATISKA INSTITUTIONEN
STOCKHOLMS UNIVERSITET
Avd. Matematik

SJÄLVSTÄNDIGT ARBETE I MATEMATIK

Onsdagen den 17 juni kl. 11:30-12:30 presenterar Tomas Berggren sitt arbete "A Riemann-Hilbert Problem Approach to Mesoscopic Fluctuations for the CUE" (30 högskolepoäng, avancerad nivå).

Handledare: Maurice Duits

Plats: Sal 32, hus 5, Kräftriket

Sammanfattning: In this thesis we will consider a particular probability measure, the Circular Unitary Ensemble, which is a famous model within Random Matrix theory.

We will give new proofs of two central limit theorem's associated to this measure. The proofs are based on the fact that the moment generating function of a linear statistic can be written as a Fredholm determinant of an integrable operator. With a Riemann-Hilbert problem approach, it is possible to evaluate the determinant, at least asymptotically.

Alla intresserade är välkomna!