

MATEMATISKA INSTITUTIONEN  
STOCKHOLMS UNIVERSITET  
Avd. Matematik

## **SJÄLVSTÄNDIGT ARBETE I MATEMATIK**

Måndagen den 14 maj kl. 11.15–12.15 presenterar Björn Bergstrand sitt arbete “Fourier transforms and Monte Carlo methods in applied analysis” (15 högskolepoäng, avancerad nivå).

Handledare: Jan-Erik Björk

Plats: Sal 21, hus 5, Kräftriket

Abstract:

We present concepts in applied analysis that stem from the Fourier transform; the Radon transform, the Central Limit Theorem and a stochastic interpretation of the Diffusion equation. The Radon inverse formula is implemented and the Monte Carlo method is used to examine the diffusion. Stochastic matrices are presented and we employ the Monte Carlo method to investigate these.

Alla intresserade är välkomna!