

MATEMATISKA INSTITUTIONEN
STOCKHOLMS UNIVERSITET
Avd. Matematik

SJÄLVSTÄNDIGT ARBETE I MATEMATIK

Onsdagen den 22 februari kl. 10–11 presenterar Elham Motiefar sitt arbete “Analysis and Application of Lie Group Theory on a certain type of PDEs in Finance” (30 högskolepoäng, grundnivå).

Handledare: Henrik Shahgolian

Plats: Sal 21, hus 5, Kräftriket

Abstract: The purpose of this study was to examine the connection between theory and practice and investigating the corresponding process in between. Another aim was to find out the connection between mathematical models and financial solutions. Because of this goal, in this thesis a financial problem was considered, the components of the problem were analysed and in order to solve such kind of problems, the method with the name Lie group analysisbased on the symmetry analysis was chosen. Also different situation of this problem were examined in the study to obtain the reductions arising from Lie symmetry of a partial differential equation (PDE) to an ordinary differential equation (ODE), which was easier to solve in comparison with solving the PDE.

Alla intresserade är välkomna!