

MATEMATISKA INSTITUTIONEN
STOCKHOLMS UNIVERSITET
Avd. Matematik

SJÄLVSTÄNDIGT ARBETE I MATEMATIK

Måndagen den 27 januarui kl. 15.00–16.00 presenterar Mark Anderstam sitt arbete “Solution methods to polynomial equations over \mathbb{Z}_2 ” (15 högskolepoäng, grundnivå).

Handledare: Samuel Lundqvist

Plats: Sal 31, hus 5, Kräftriket

Sammanfattning: We take a look at multivariable polynomial equations over \mathbb{Z}_2 and describe the tools needed to find solutions in \mathbb{Z}_2^n . We start by presenting a particular kind of solution method based on the fundamental trial and error strategy and we then use this to, eventually, find three different methods for solving these polynomial equations in a more systematic way. We later implement the solution methods in Python using arrays of booleans to represent monomials and asks which algorithm is more time efficient. We also say something about what could be improved in the future to make the algorithms more efficient and explain why further development of one algorithm is of greater interest to us.

Alla intresserade är välkomna!