

Main supervisor: Marc Hellmuth (marc.hellmuth@math.su.se)

Co-supervisor: Lars Arvestad (arve@math.su.se)

Project: Computational and mathematical studies of ancient DNA

In this PhD project, you will develop mathematical and computational tools for the study of ancient DNA. The project is conducted in collaboration with Anders Götherström (Dept of Archaeology) and Love Dalén (Dept of Zoology and the Swedish Museum of Natural History), who founded Center for Palaeogenetics at Stockholm University.

Computation and data availability has changed biology and medicine, and enabled entirely new scientific questions to be asked. In palaeogenomics, the quality of DNA is fairly low which causes extra challenges for analysis, because the standard tools are not constructed for low-quality data and the specific data characteristics of ancient DNA.

We are looking for candidates with a strong background in Bioinformatics, Mathematics, Statistics, and Computer Science. The work will include programming, practical data analysis, as well as theoretical analysis.