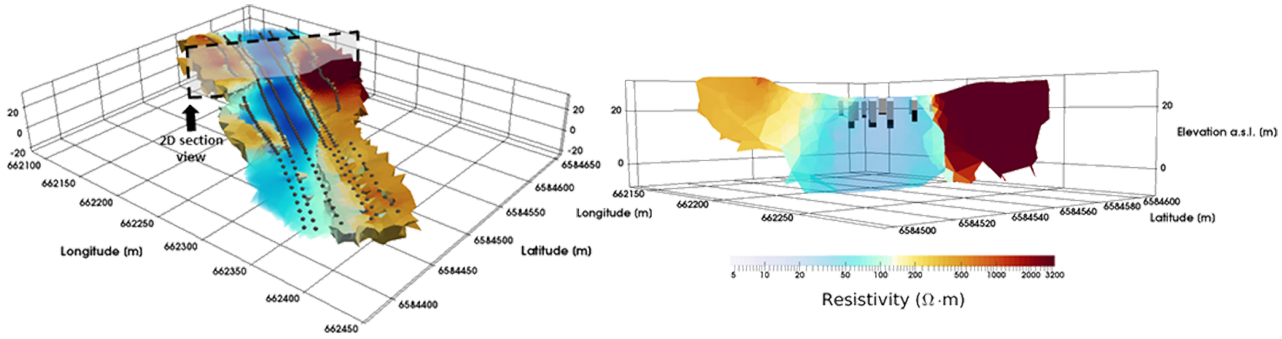


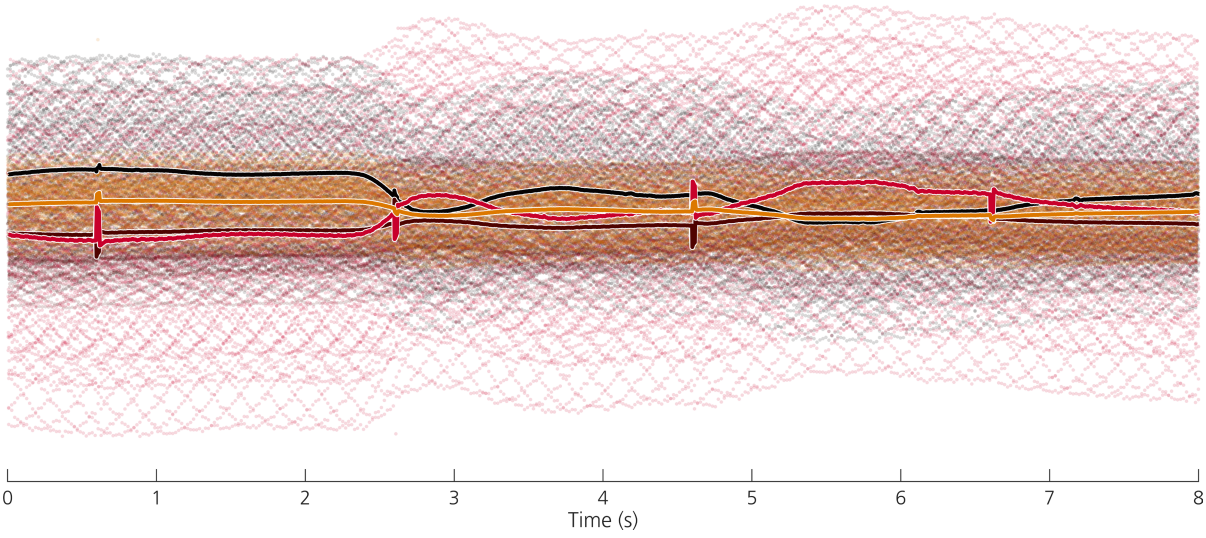
Masters thesis opportunity

MODELLING NON-STATIONARY DISTURBANCES IN DCIP DATA

Resistivity and time domain induced polarization (DCIP) measurements is a great tool for mapping properties of the subsurface. However, disturbances from urban transport systems powered by direct current such as trams and metro restricts the applicability of the method. These transport systems generates varying background potential levels which in many cases renders the DCIP data useless.

The master thesis project invloves analysis of existiving DCIP data to find suitable machine learning or signal processing apporaches to deal with the disturbances. The disturbances can be expected to have a transient non-stationary stochastic character. Appropriate non-stationary models and estimation algorithms therefore need to be carefully chosen and evaluated.

We are looking for one or two highly skilled students interested in getting involved in the project. The work can be carried jointly by students at separate departments, for example one student from civil engineering and one from applied math. The thesis work is preferably started during the spring semester of 2019.



LUNDS UNIVERSITET
Lunds Tekniska Högskola

Torleif Dahlin torleif.dahlin@tg.lth.se
Per-Ivar Olsson per-ivar.olsson@tg.lth.se
Maria Sandsten sandsten@maths.lth.se

www.tg.lth.se
www.maths.lth.se