GEOTECHNICAL RESEARCH PROJECTS 2015

Department of Engineering and
Aarhus School of Engineering, Aarhus University
MSc. Teknisk Geologi

MSc. Civil and Architectural Engineering
Geotechnical Specialisation Package

- **Experimental Geotechnics (Lab testing)** - 5 ECTS
- **Numerical Analysis in Geotechnical Engineering** - 5 ECTS
- **Geotechnical Field Testing and Monitoring** - 5 ECTS

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AARHUS UNIVERSITY
DEPARTMENT OF ENGINEERING

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22 OCTOBER 2015
CURRENT RESEARCH TOPICS

A. Stress-strain behaviour of high Plasticity OC Palaeogene clays

B. Rate and time effects in clays

C. Soil-Structure interaction

Lab element testing, field testing / monitoring, numerical modelling
STRESS-STRAIN BEHAVIOUR OF PALAEOGENE CLAYS

PhD
Pile driving, heave and pore pressure
(Thomas Simonsen, Geo)
2015-2018

PhD
Influence of smectite on the deformation behaviour
(Michael Lodahl, COWI A/S)
2014-2017
Influence of Bitumen on the development of negative skin friction on driven piles.

Full scale testing 2013 - 2018
OVERVIEW OF RECENT RESEARCH PROJECTS 2014-2015

1. MSc. Influence of strain rate on the residual strength of clays (DS testing) 2014
2. MSc. Numerical Slope Stability Analysis of Homogeneous Soils and a Case Study of Progressive Failure in High Plasticity Clay (Plaxis and SlopeW) 2014
3. MSc. Strength development of cement-bentonite slurries (UU, CU triaxial) 2015
4. MSc. Permeability of cement-bentonite slurries (permeability testing) 2015
5. MSc. Betydning af prøvedimensioner og trykhovedernes ruhed for målte styrkeegenskaber på kohæsionsjord (CU triaxial testing) 2015

2 x MSc. Investigation of DS, DSS and CRS apparatus and rate effects (DS, DSS and CRS testing) 2015
2 x MSc. Numerical modeling of pile driving in Palaeogene clays (Plaxis) 2015
2 x MSc. Influence of salt concentration on the deformation behaviour of smectite-kaolin mixtures (Atterberg limits, oedometer testing) 2015
5 x BSc. Influence of bitumen on the development of negative skin friction on driven concrete piles (Full scale testing, field monitoring, interface test, numerical modelling) 2013 - 2015

Associated to PhD project