



# Numerical parametric study of time dependent behavior in deep settlements

## Graduation assignment

**CRUX is a leading independent consulting firm in the field of geotechnical engineering, geohydrology and environmental remediation.**

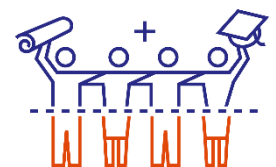
Through our intensive cooperation with our sister companies BouwRisk (monitoring) and CEMS (engineering microservices), we are able to provide innovative, (geo)technical design solutions for all subsurface issues. One of these issues concerns bearing capacity for low embankments on weak soils.

When designing high rise buildings in the Netherlands, an important aspect is the influence of deep clay layers below foundation level (for instance the Eemclay in Amsterdam and the Kedichem clay in Rotterdam). When designing a foundation in these

regions, modelling the time dependent settlement behaviour is a crucial aspect in the design choices. There is however much uncertainty in how well the models originally designed for settlement in shallow layers operate when used in these specific soil conditions. Not only in reference to stress levels but also in consolidation dependent parameters and time stepping.

Your research will focus on validating these models for the specific use in high rise design and a parametric analyses on the parameters that influence the result. The ultimate goal of this research is to increase the accuracy of the foundation design.

Looking for another assignment or internship? Contact us and ask about the opportunities.



Interested in taking on this subject in a dynamic and professional working environment? Get in touch:

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Good coffee, challenging projects and being part of Jong CRUX are the basics of your career at CRUX. We are happy to tell you about the opportunities.