



Master's thesis (30 ECTS)

MT_72

Working Title

Modelling of “hard soil – soft rock” by utilizing different constitutive laws

Project objectives

Many engineering problems in geotechnics can be linked to excavations in hard soils or soft rocks (HSSR). Challenges already arise within the characterization of the material in situ, which is fundamental for all (numerical) calculations. This thesis should include: a literature study considering possible constitutive laws for the simulation of the mechanical behaviour of weak rock, calibration and testing of the Hoek Brown Softening (HBS) model with respect to HSSR, numerical simulations and a comparison of the HBS to other constitutive laws.

Student has enthusiasm for

Numerical analysis, material science

Requirements on student

Attention to detail, engagement, good writing

Start (earliest / latest)

April 2021

Project term (min. / max.)

6 months full-time

Coop. with external institution

no

Possibility of remuneration

no

Contact person

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PDF on

tunnel.tugraz.at:

