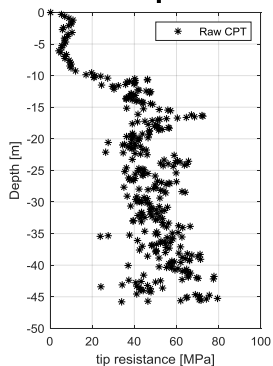


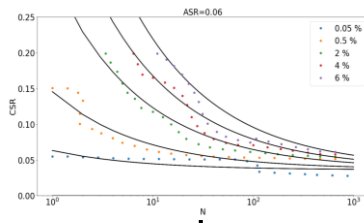
Uncertainty quantification from available data

CPT



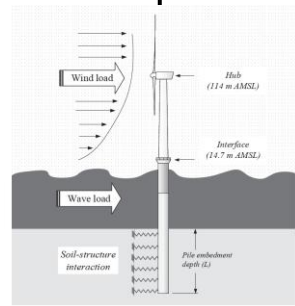
Soil stiffness

Cyclic laboratory tests



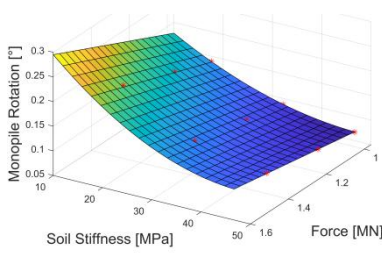
Cyclic contour diagram

Metocean data & HAWC2 model



Storm event

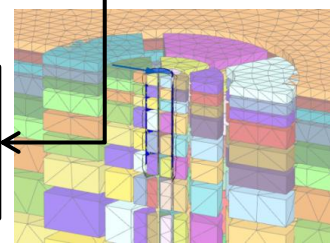
Stochastic input variables X



Response surface

Check if it yields same structural tilting as FEM

3D FEM model (SCD method)



Limit State Equation

Monte Carlo simulation & Probability of failure (PoF)

Check if it meets target

Target PoF 5e-4

No
Update foundation geometry

Yes
Safe design

Foundation Geometry