

Challenges: Computational, models, parameters:

Establish bounds on the effects of nonlinear response – how important are these effects?

Equivalent linear in 3D? 3 component – 2 dimensional model where shear deformation / dilation are uncoupled?

Soil vs. rock: What is the first order constitutive model approximation to perform nonlinear 3D site response?

Start simple: Elastic properties E , ν ; Strength; nonlinear (intermediate strains); coupled shear-volumetric strains

Domain reduction methods?

Numerical experiments in constrained region – 3D
model with soft soils

Regional mapped strength parameters

3. Site (region) characterization:

Input parameters on a regional scale? Velocity profiles?

Develop improved GTL based on gradient, not on 350m fixed depth to bedrock

Empirical correlations for additional parameters, for example OCR, shear strength?