

PRECIS

This volume contains background information about, and descriptions of, the theoretical basis for the basic components of *UDEC*.

The theoretical formulation for *UDEC* is described in [Section 1](#). This includes an overview of discontinuum modeling, contact detection, modeling of joints, damping and mass scaling.

[Section 2](#) describes an automated procedure in *UDEC* that calculates the factor of safety for a model.

The use of *UDEC* in tabulation of the energy changes due to excavations is described in [Section 3](#).

