

## PRECIS

This volume is the user's guide to *UDEC*. This guide contains general information on the operation of *UDEC* for engineering mechanics computation.

[Section 1](#) gives an introduction to the capabilities and applications of *UDEC*. An overview of the new features in the latest version of *UDEC* is also provided.

The first-time user should consult [Section 2](#) for an introduction to the operation of *UDEC*. The installation and operation procedures are given, along with a simple tutorial to guide the new user through a *UDEC* analysis.

[Section 3](#) provides general guidance in the use of *UDEC* in problem solving for static mechanical analysis for geotechnical engineering.

An introduction to the built-in programming language *FISH* is given in [Section 4](#). This includes a tutorial on the use of the *FISH* language. Note that no programming experience is assumed.

Various items of interest to *UDEC* users are contained in [Section 5](#), including a *UDEC* runtime benchmark on several different types of computers, and procedures for reporting errors and requesting technical assistance.

The *UDEC* Manual consists of the following seven volumes. (The titles in parentheses below are the names used to refer to the volumes in the text.) Note that the **COMMAND REFERENCE** and **FISH REFERENCE** are now provided as online help accessible from *UDEC*.

**USER'S GUIDE – (User's Guide)** – an introduction to *UDEC* and its capabilities

**THEORY AND BACKGROUND – (Theory and Background)** – thorough discussions of the built-in features in *UDEC*, a discussion of factor-of-safety calculations, and a section on energy calculation

**CONSTITUTIVE MODELS – (Constitutive Models)** – theoretical descriptions of the constitutive models in *UDEC*

**CREEP MATERIAL MODELS – (Creep Material Models)** – theoretical descriptions of the creep material models in *UDEC*

**SPECIAL FEATURES – STRUCTURES/FLUID FLOW/THERMAL/DYNAMICS – (Special Features)** – detailed descriptions of several features: Structural Elements, Thermal Analysis, the optional Barton-Bandis Joint Model and Dynamic Analysis

**VERIFICATION PROBLEMS (Verifications Problems)** – a collection of verification problems

**EXAMPLE APPLICATIONS (Example Applications)** – a collection of example applications

