



JNTUH COLLEGE OF ENGINEERING HYDERABAD
(AUTONOMOUS)
KUKATPALLY, HYDERABAD – 500 085, TELANGANA STATE, INDIA
CENTRE OF EXCELLENCE - DISASTER MANAGEMENT (TEQIP-II)

ADVERTISEMENT

1.PLAXIS -2D version -2015

PLAXIS is the finite element software specifically intended for the analysis of deformation and stability in geotechnical engineering projects. Geotechnical applications require advanced constitutive models for the simulation of the non-linear and time-dependent behavior of soils. PLAXIS is equipped with special features to deal with the numerous aspects of complex geotechnical structures. The Staged constructions mode enables a realistic simulation of construction and excavation processes by activating and deactivating soil volume clusters and structural objects, application of loads, changing of water tables, etc.

PLAXIS 2D AE Suite: PLAXIS 2D suite includes all the 2D module of PLAXIS family.

Basic Module – This includes static elasto-plastic deformation, advanced soil models, consolidation, updated mesh and steady state groundwater flow.

New and improved features in PLAXIS 2D 2015

- UDSM for Shotcrete to model tunnel lining (VIP, upon request)
- Non-linear elastoplastic behaviour for plate elements (Specify M-kappa diagrams)
- Option to apply strength reduction only to selected clusters.
- Option to apply strength reduction to selected structural elements.
- Vacuum behaviour for drains to model vacuum consolidation
- New implementation of Sensitivity analysis and Parameter variation (VIP)
- Command line support to query results in Output
- Commands Runner available in Output (VIP)
- Remote Scripting API with Python wrapper for Output (VIP)
- Added an array tool for easily creating copies
- Embedded beam row improvements:
 - Linear & multi-linear lateral skin resistance
 - Multi-linear and layer dependent axial skin resistance
 - Elastoplastic behaviour
 - Improved visualization for 'Rockbolt' and 'Pile' behaviour
- Define Biot alpha coefficient for material models
- Flexible default fixities with possibility to specify per model boundary
- Consistent mass matrix and mass matrix parameter for improved dynamic calculation results (Dynamics)
- Dynamic multiplier for bending moment component of point load (Dynamics).

2. FLAC-3D (Software FLAC3D Version 5.01.)

FLAC3D Version 5.01 standalone.

Standard License (FLAC3D version 5.01) includes dynamic, C++Plug in, creep, thermal.

➤ Features

- Large-strain simulation of continua, with interfaces or slip-planes to represent distinct interfaces along which slip and/or separation may occur, thereby simulating the presence of faults, joints, or frictional boundaries
- Explicit solution scheme that gives stable solutions to unstable physical processes
- Twelve built-in material models: the "null" model, three elasticity models, and eight plasticity models
- Available in 32-bit and 64-bit versions for Windows
- Optional modules include: thermal and creep calculations, dynamic analysis capability, and user-defined constitutive models written in C++
- Continuous gradient or statistical distribution of any property may be specified
- Automatic 3D grid generator using pre-defined shapes to create intersecting internal regions
- Convenient specification of boundary conditions and initial conditions
- Water table for effective stress calculations
- Groundwater flow fully coupled to mechanical calculation (including negative pore pressure, unsaturated flow, and phreatic surface conditions)
- Structural elements (liners, piles, cables, etc.) that interact with the surrounding rock or soil
- Built-in programming language (*FISH*) to add user-defined features
- Graphical output in six industry-standard image formats and animated output in two (AVI and DCX)
- External geometry import option for leading Computer-Aided Design (CAD) tools

3.GEO-SLOPE -2012

GeoStudio 2012 incorporates enhancements to each product in the GeoStudio suite: SLOPE/W, SEEP/W, SIGMA/W, QUAKE/W, TEMP/W, CTRAN/W, AIR/W and VADOSE/W. This software includes the following features:

- SLOPE/W

SLOPE/W is the leading slope stability CAD software product for computing the factor of safety of earth and rock slopes. SLOPE/W can effectively analyze both simple and complex problems for a variety of slip surface shapes, pore-water pressure conditions, soil properties, analysis methods and loading conditions.

- SEEP/W

SEEP/W is a finite element CAD software product for analyzing groundwater seepage and excess pore-water pressure dissipation problems within porous materials such as soil and rock. Its comprehensive formulation allows you to consider analyses ranging from simple, saturated steady-state problems to sophisticated, saturated/unsaturated time-dependent problems. SEEP/W can be applied to the analysis and design of geotechnical, civil, hydrogeological, and mining engineering projects.

- SIGMA/W

SIGMA/W is a finite element CAD software product that can be used to perform stress and deformation analyses of earth structures. Its comprehensive formulation makes it possible to analyze both simple and highly complex problems. SIGMA/W can perform a simple linear elastic deformation analysis or a highly sophisticated, nonlinear elastic-plastic effective stress analysis.

- QUAKE/W

QUAKE/W is a geotechnical finite element CAD software product for the dynamic analysis of earth structures subjected to earthquake shaking, or point dynamic forces from a blast or a sudden impact load. QUAKE/W determines the motion and excess pore-water pressures that arise due to shaking. Its comprehensive formulation makes QUAKE/W well suited to analyzing a wide range of problems.

- TEMP/W

TEMP/W is a finite element CAD software product for analyzing thermal changes in the ground due to environmental factors or the construction of facilities such as buildings or pipelines. The comprehensive formulation makes it possible to analyze both simple and highly complex geothermal problems. TEMP/W can be applied to the geothermal analysis and design of geotechnical, civil, and mining engineering projects, including facilities subjected to freezing and thawing temperature changes.

- CTRAN/W

CTRAN/W is a finite element CAD software product that can be used to model the movement of contaminants through porous materials such as soil and rock. The comprehensive formulation of CTRAN/W makes it possible to analyze problems varying from simple particle tracking in response to the movement of water, to complex processes involving diffusion, dispersion, adsorption, radioactive decay and density dependencies. CTRAN/W can be applied to the analysis and design of geotechnical, civil, hydrogeological, and mining engineering projects.

- AIR/W

AIR/W is a finite element CAD software product for analyzing groundwater-air interaction problems within porous materials such as soil and rock. Its comprehensive formulation allows you to consider analyses ranging from simple, saturated steady-state problems to sophisticated, saturated/unsaturated time-dependent problems. AIR/W can be applied to the analysis and design of geotechnical, civil, hydrogeological, and mining engineering projects.

- VADOSE/W

VADOSE/W is a finite element CAD software product for analyzing flow from the environment, across the ground surface, through the unsaturated vadose zone and into the local groundwater regime. Its comprehensive formulation allows the analysis of both simple and complex problems, from a simple analysis of ground infiltration due to rainfall, to a sophisticated model considering snow melt and root transpiration as well as surface evaporation, runoff, ponding, and gas diffusion. VADOSE/W can be applied to the analysis and design of geotechnical, mining, hydrogeological, agricultural, and civil engineering projects.

Note: The vendors are requested to submit the details of their firms to the Principal, JNTUHCEH on or before 29/06/2015, so as to send the invitations for the purchase of the above equipment.

Sd/-

PRINCIPAL