

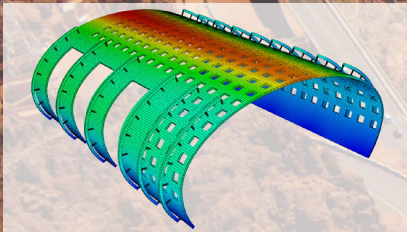
CivilFEM® powered by Marc®



INNOVATING AT ALL LEVELS

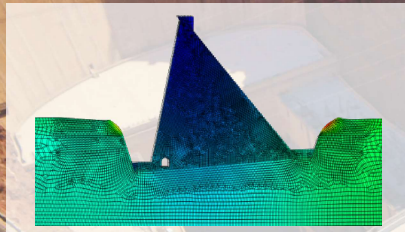


General Purpose Finite Element Software for Civil, Structural and Geotechnical Engineering



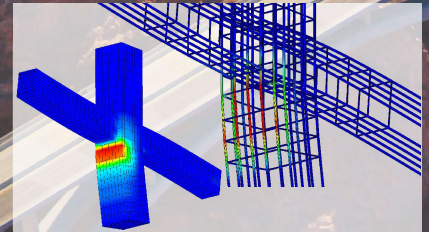
PROJECTS

Seismic analysis and advanced design of industrial buildings, high rise buildings and sport stadiums, nuclear, wind and thermal power plants, off-shore and marine structures, bridges, (concrete, steel, cable, etc...), tunnels, foundations, piles, and much more...



CAPABILITIES

User friendly and easy to learn environment to perform advanced non-linear simulations quickly and accurately project and design. Checking and design according to Codes and Standards. Parametric macros with Python, Multilanguage interface.



BENEFITS

Increasing quality and stability of project and design solutions. Save time in the construction process by shifting. Improve cost/performance factors by optimizing the structural material and considering nonlinear world behavior.

FOR PROFESSIONALS

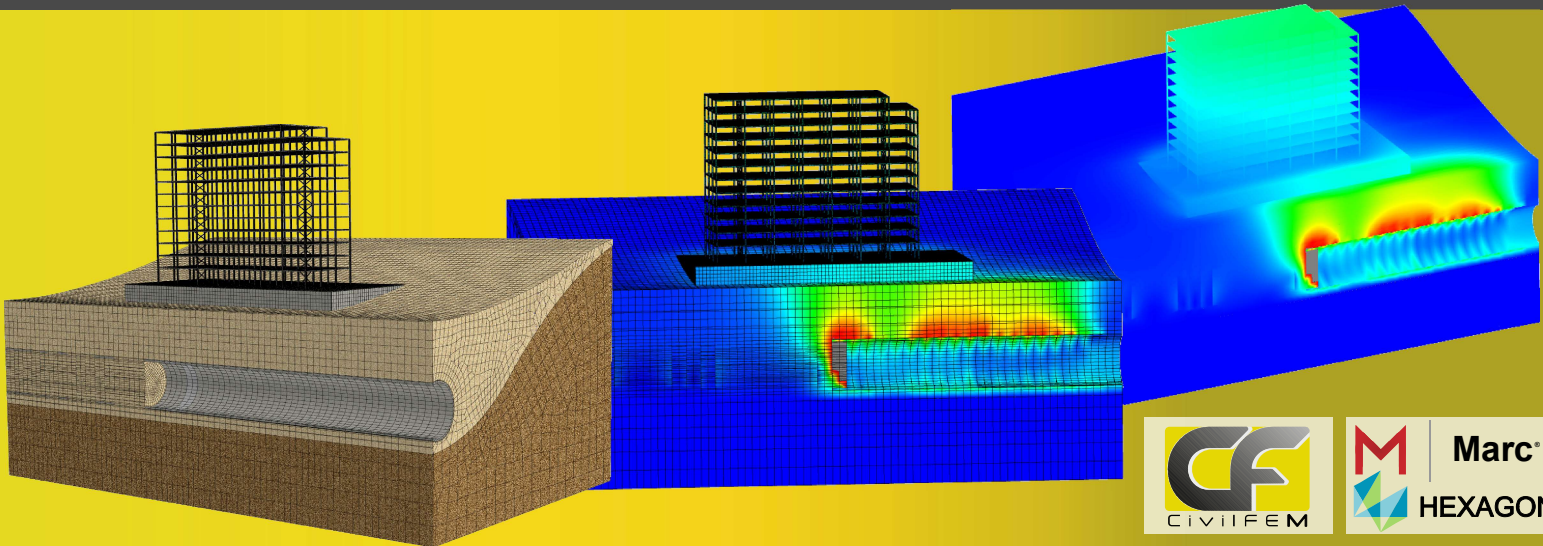
CivilFEM® offers higher accuracy which is, after all, the purpose of engineering. Better precision during all steps of the construction process in structural analysis means both increased safety and enormous savings in material and construction costs.



UNIQUE SOLUTION

CivilFEM® lowers the barriers to non-linear FEA for Civil, Structural and Geotechnical Engineering by combining the very advanced solver provided by **Marc® from HEXAGON®** with a friendly easy-to-use Graphic Interface for a variety of important problems with single and multiple non-linearities."





CHECK OUT ALL CIVILFEM CAPABILITIES

CivilFEM® INTRO

Geometry modeler & cad import/export
Automatic meshing | Cross-section and material library
Multi-language interface | Escalar and vectorial parametric modelling
Plot, List, Excel export, Path and history results | Macros with Python | Static, modal, spectrum, harmonic, linear and non-linear transient analysis
Linear buckling | Non-linear contacts Glue & Friction
Springs, cables and tendons Large deflections and strains
International Codes & Standards

CivilFEM® ADVANCED

Non-linear evolutive construction process & material time-dependent properties
Nonlinear reinforced concrete (Cracking, Crushing, Fiber reinforced, Creep and Shrinkage) | Post/pre-stressed concrete (beam, shell and solid elements)
Geotechnical material models: Drucker-Prager, Mohr-Coulomb (C&Phi variables), Cam-Clay, Hyperbolic model (Duncan-Chang) & Hoek and Brown | Non-linear buckling | User non-linear material (strain-stress diagram definition) | Advanced non-linear contacts: Bond-slip & Cohesive- Frictional
Includes All CivilFEM® Intro Capabilities

CivilFEM® EXPERT

Heat transfer & Thermal-structural coupled analysis: Steady & Transient analysis. Material temperature-dependent properties | Isotropic and orthotropic thermal conductivity | Heat conduction, convection and Radiation | Thermal contacts
Seepage & Seepage-structural coupled analysis: Steady & Transient analysis. Orthotropic permeability properties | flow in saturated-unsaturated soils
Rainfall, water level and Drains | Fluctuating water table and transient saturated line calculation, pore water pressure and effective stress and slope stability analysis
Includes CivilFEM® Advanced Capabilities

CivilFEM® NPP

Checking & Design according to NPP Codes:
ACI 349-06 / ACI 349-13 / ITER Structural Design Code for Buildings
Ingeciber S.A. Certification & Quality Nuclear Assurance System



Add on to any CivilFEM®.

