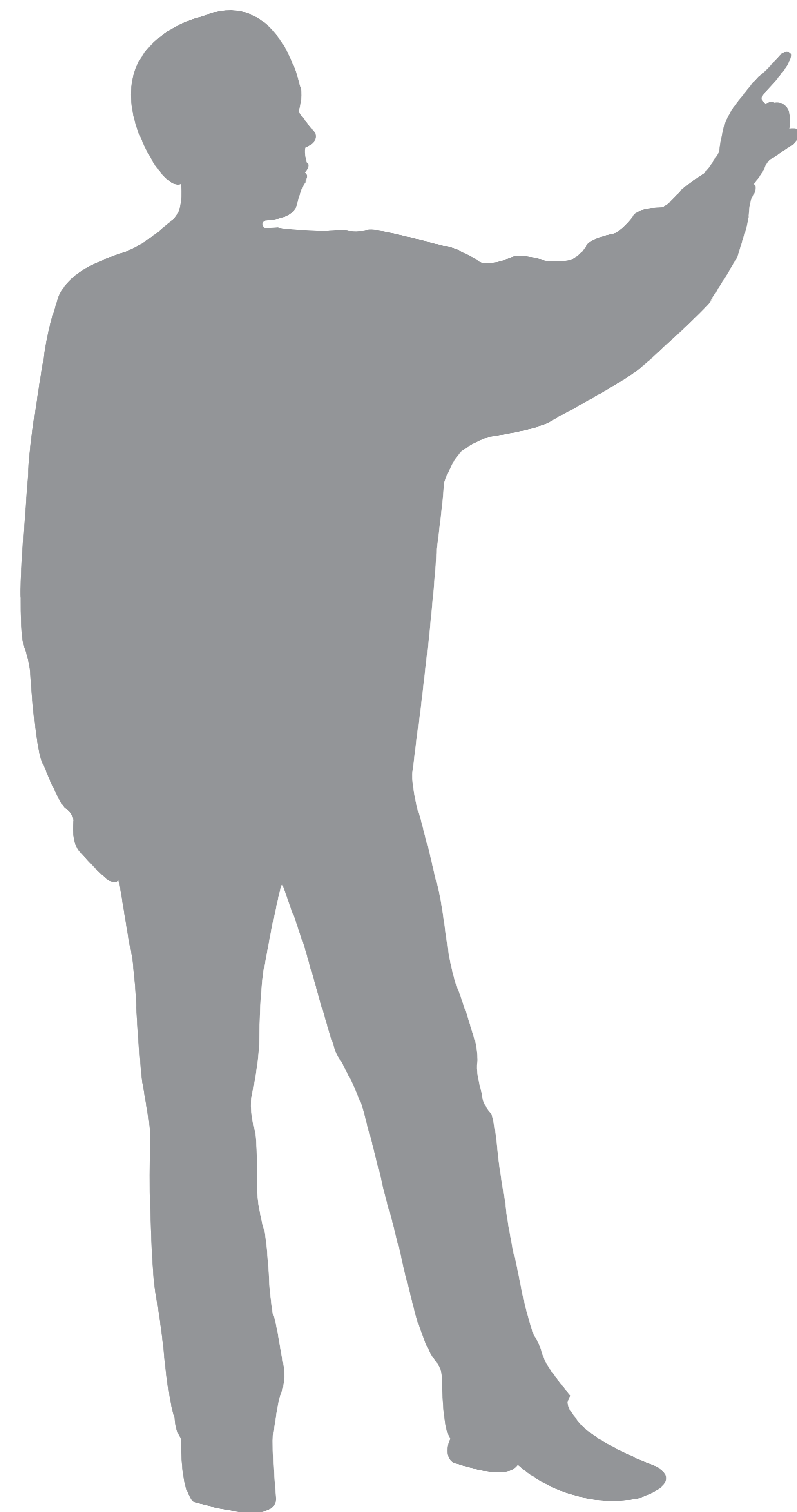


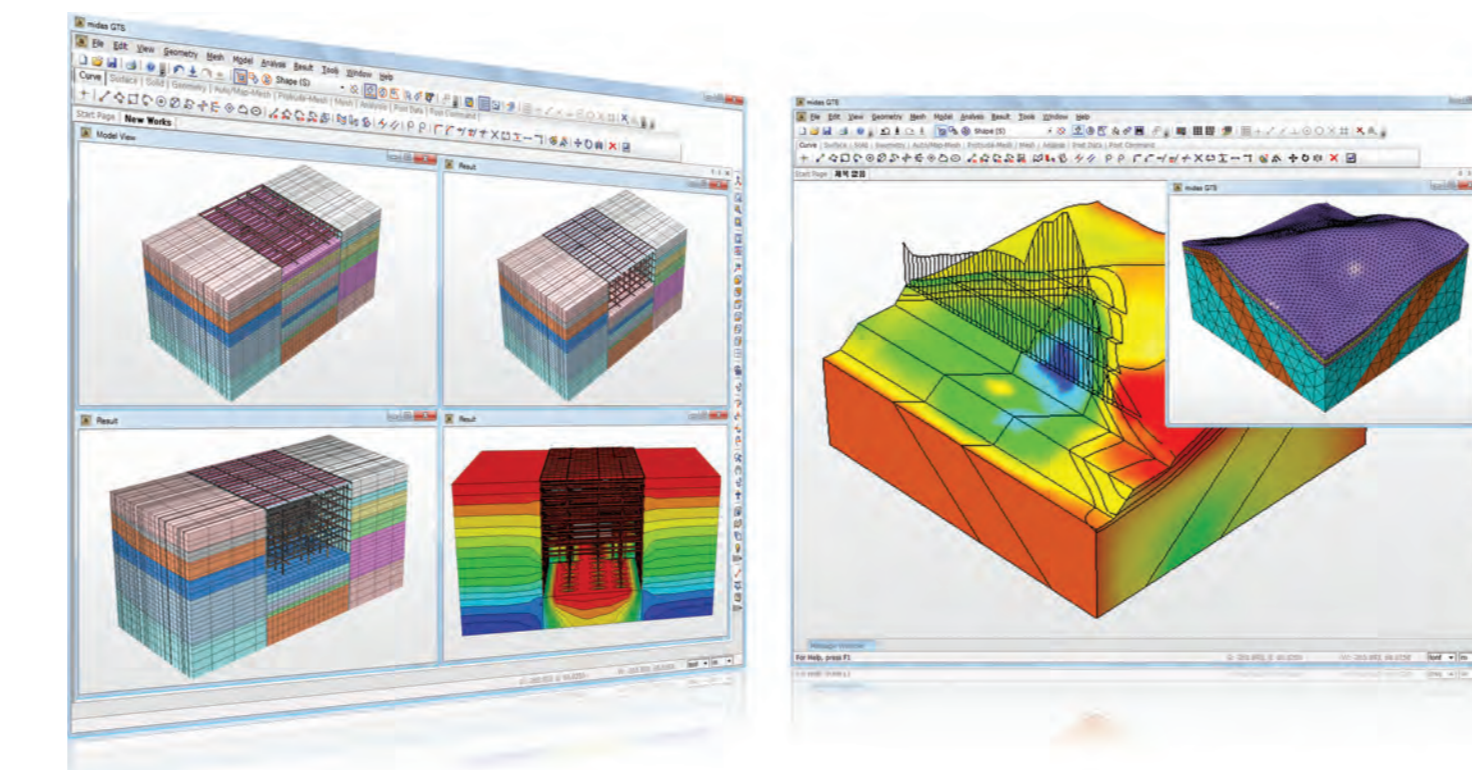
800x2300



3D Geotechnical Engineering Solutions

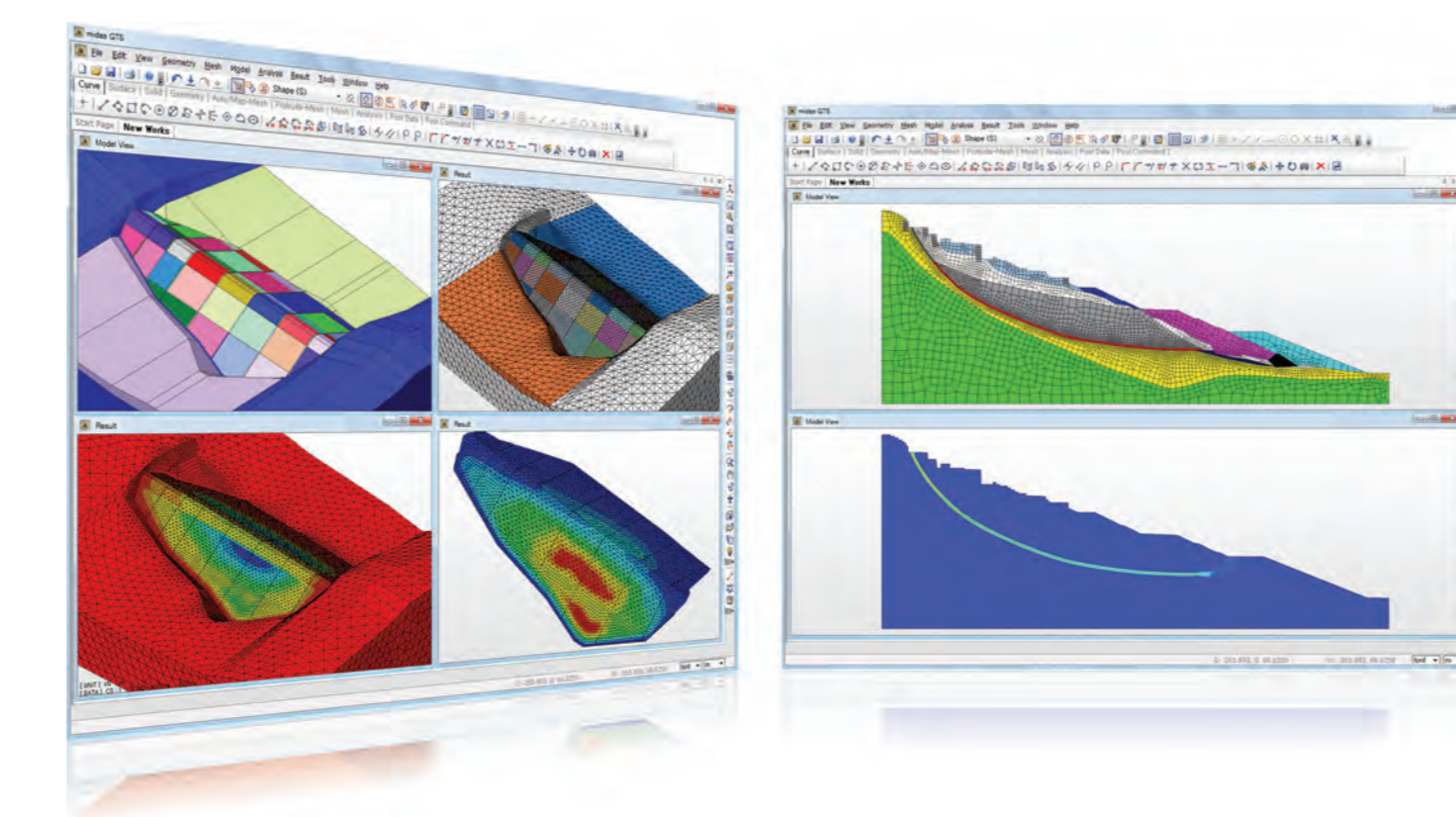
Excavations, Embankments and Slope Stability

- Nonlinear static analysis based on construction stages
- Water level definition in drained or undrained conditions
- Factor of Safety and failure analysis using $c - \phi$ reduction method



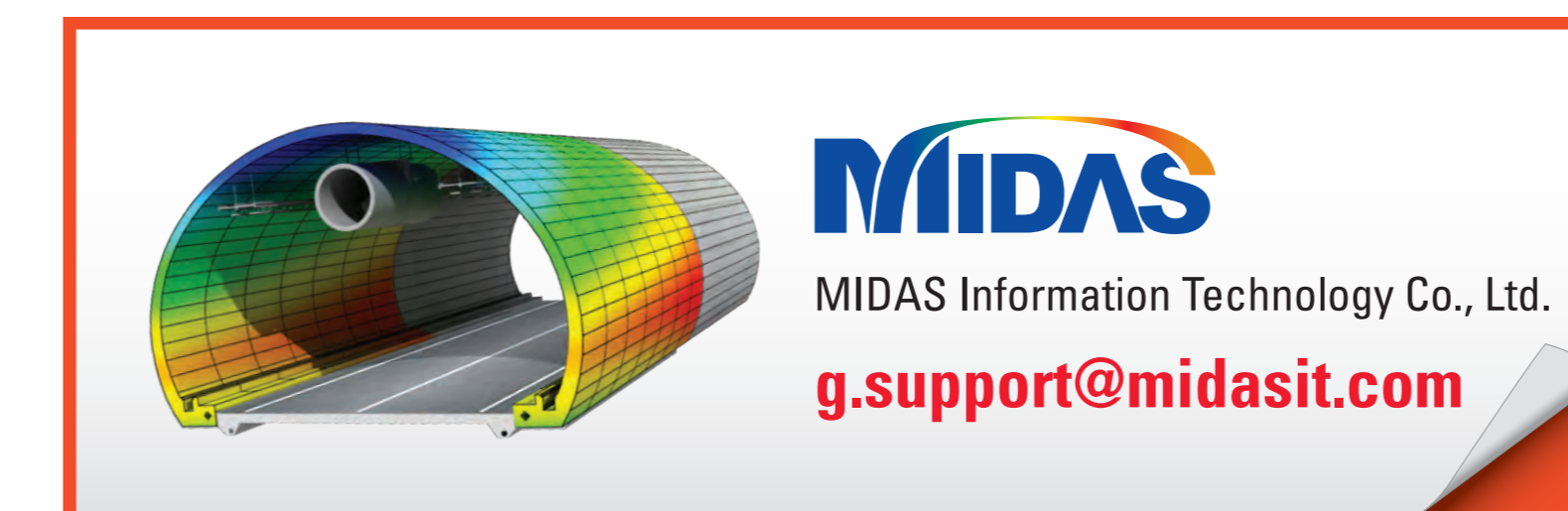
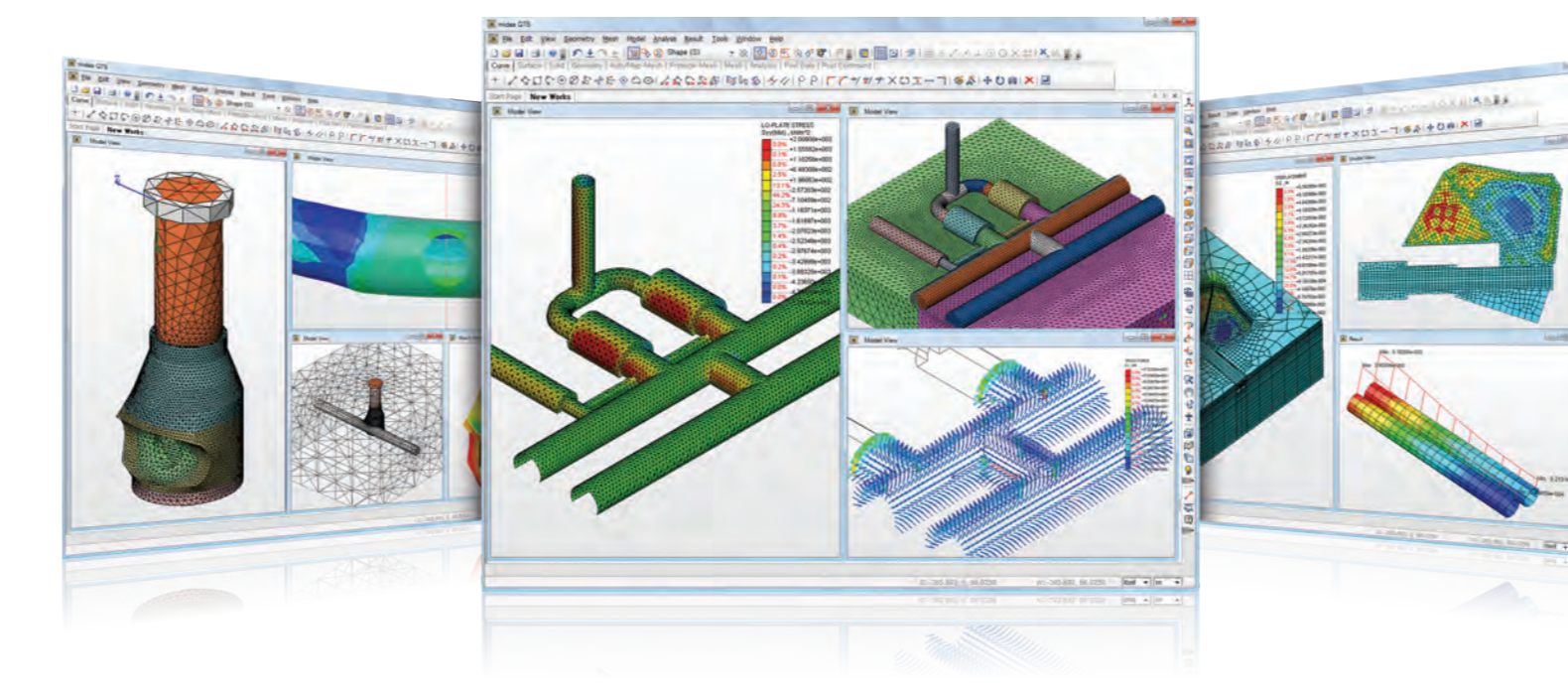
Groundwater Flow and Coupled Analyses

- Steady state and transient seepage for tunnels, dams, slopes
- Expanded application of Darcy's law (saturated / unsaturated)
- Stress-seepage semi-coupled analysis
- Fully coupled consolidation analysis

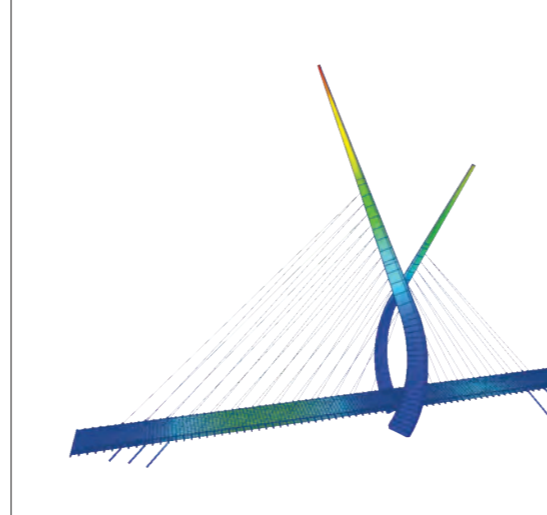
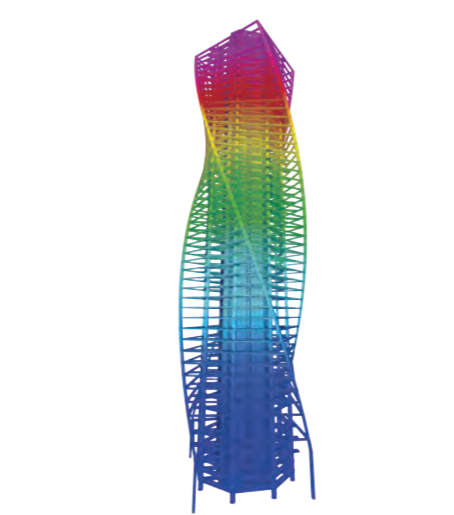
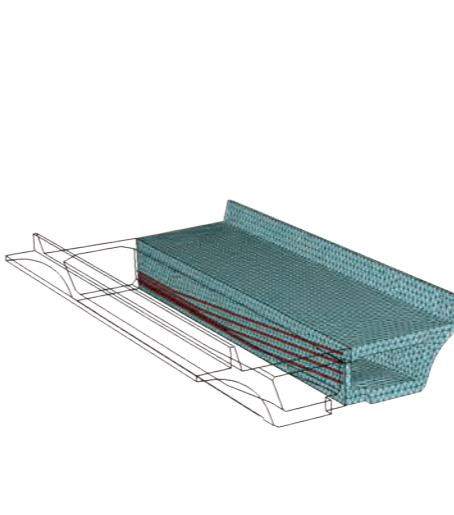


Unconventional Tunnel Intersections

- Complex subsurface strata and terrain modeling
- Tunnel entrances, T-type/Y-type interconnections, shaft-lateral-main tunnel connections, Subway stations
- Auto-generation of Tunnel Construction Stages
- Auto-generation of anchors and rock bolts



MIDAS Family Programs •

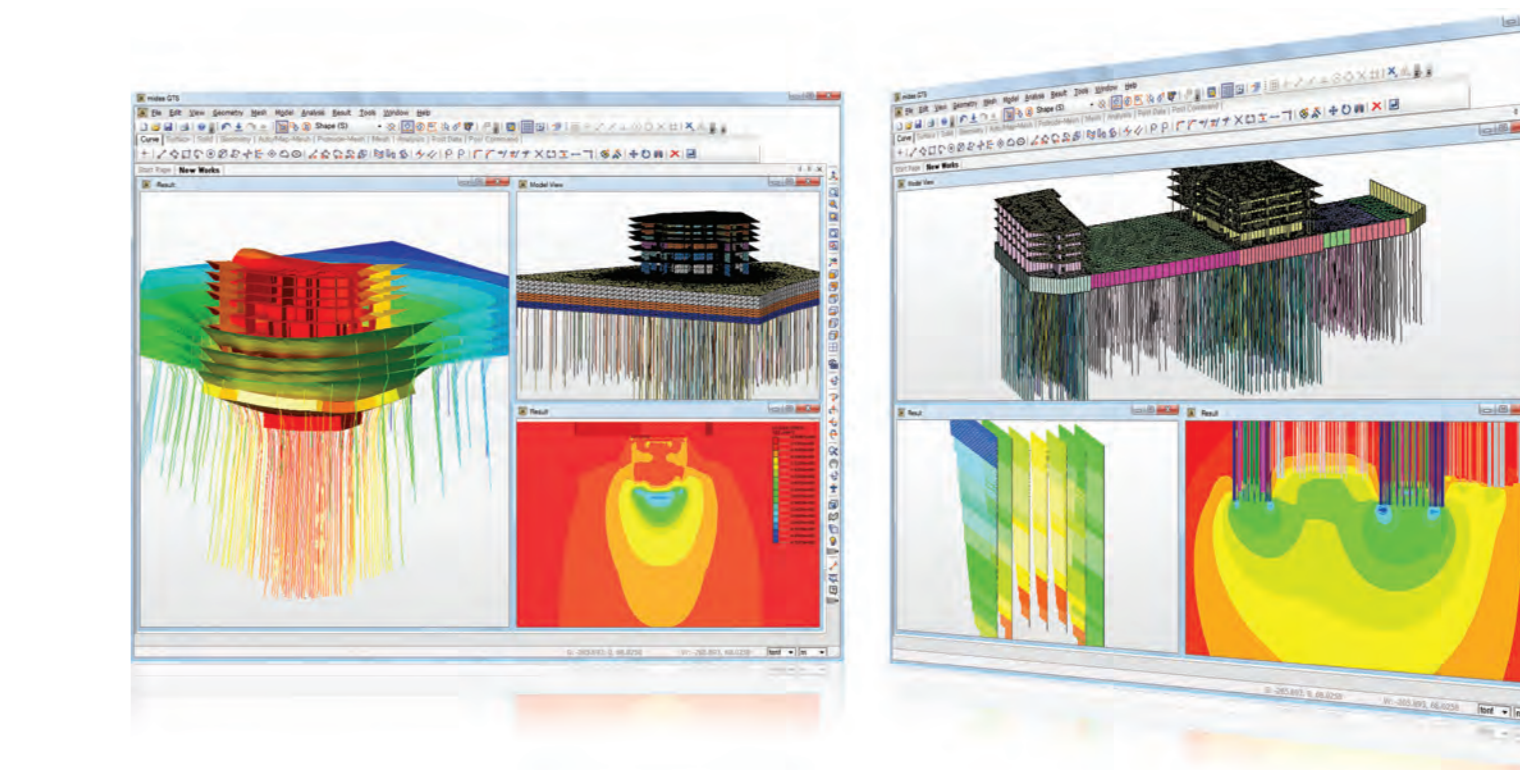
 midas Civil <small>Design for Segmental, Cable stayed & Composite girder bridges</small>	 midas iGen <small>Tall buildings, Integrated analysis with slabs, shear walls & frames</small>	 midas FEA <small>Bridge CFD, Concrete cracking, Contact & Fatigue analyses</small>
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<http://jp.midasuser.com/geotech>

Deep Foundations and Soil-Structure Interaction

- Soil-pile friction captured by nonlinear interface behavior
- Pile group interaction captured by full 3D modeling
- 3D model size optimized for piled raft foundations using dedicated embedded pile elements



Vibration Analysis for Earthquake, Blasting

- Eigenvalue, response spectrum and time history analyses
- Earthquake history database and seismic wave auto-generation

