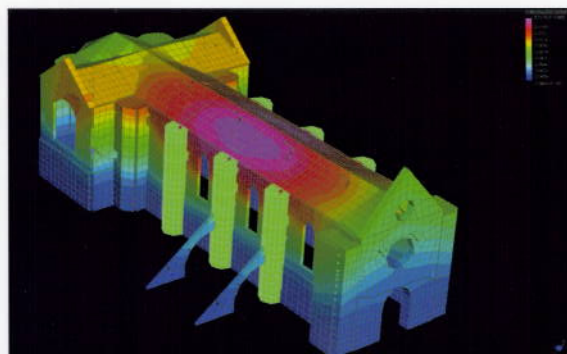
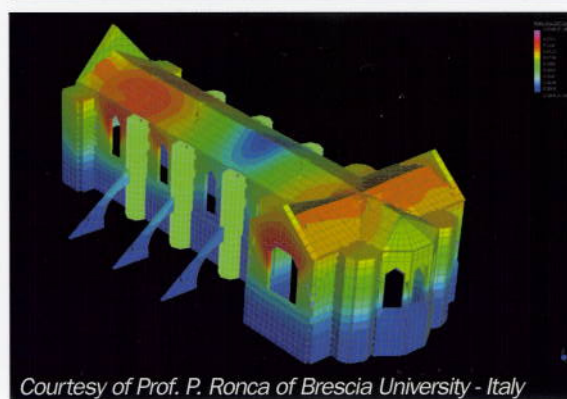


Historical Buildings

Straus7 includes complex constitutive models for soil and masonry structures, for 2D and 3D applications. Analysis can be non-linear static or non-linear transient dynamic.



The Basilica Superiore di San Francesco in Assisi - Italy damaged during the earthquake of 26/9/1997



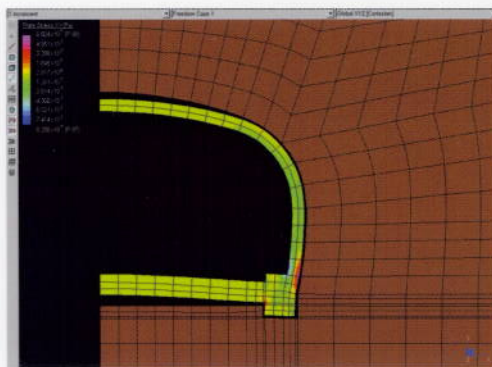
Courtesy of Prof. P. Ronca of Brescia University - Italy

Geotechnical Applications

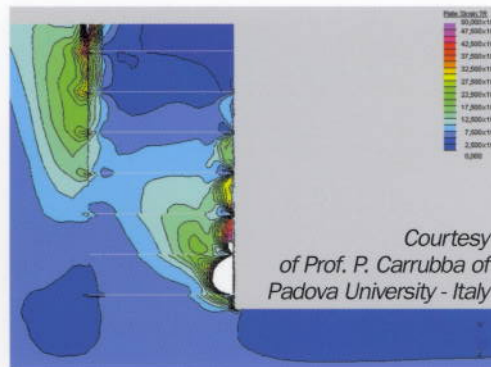
Straus7 can be used to model the complex interaction phenomena occurring between soil and nails, during the nailing sequence.



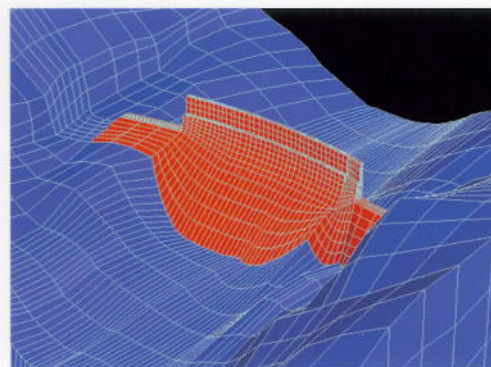
Concrete tunnel analysed as a non-linear plane strain model. Contact elements are used along the interface between the soil and the concrete to monitor separation such as uplift.



Post-tensioning analysis of concrete arch dam.



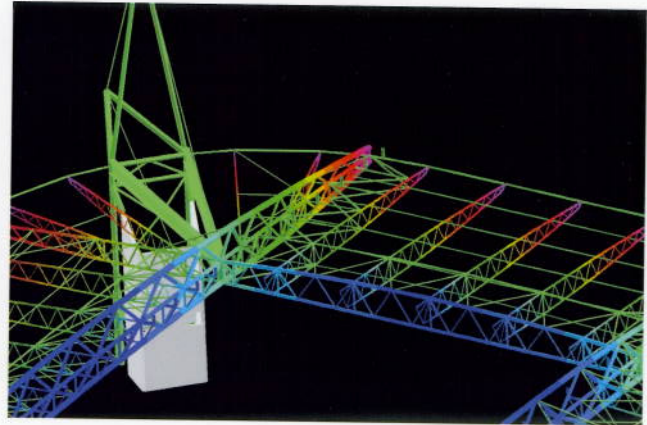
Courtesy of Prof. P. Carrubba of Padova University - Italy



2D and 3D Automatic Meshing - The Automatic mesher in Straus7 supports both IGES and SAT file formats. The mesher is tightly integrated to a set of powerful tools for geometry cleaning, repairing and de-featuring. This greatly simplifies the transition between CAD and FEA.

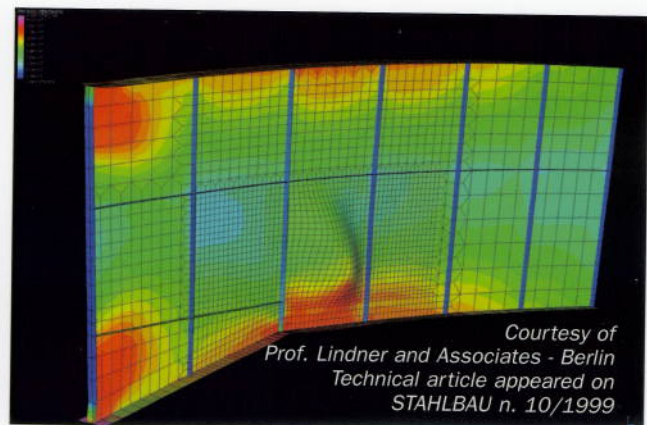
Millennium Stadium in Cardiff

Straus7 was used to model the roof mechanisms and the assembling equipment. The stadium covers 40,000 sqm with 10,000 sqm of mobile roof structure. Analysis was conducted by Studio Giorgio Romaro in Padua, sub-contracted by Cimolai Spa in Pordenone, Italy.



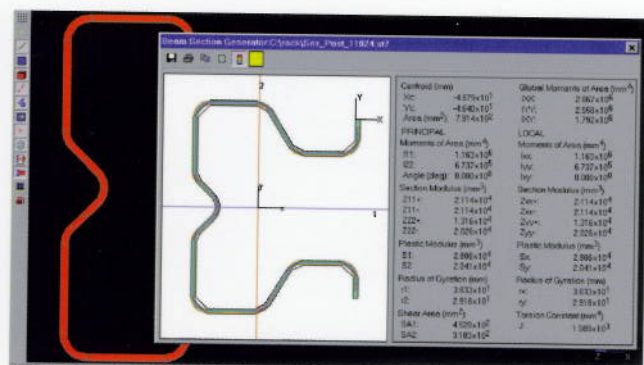
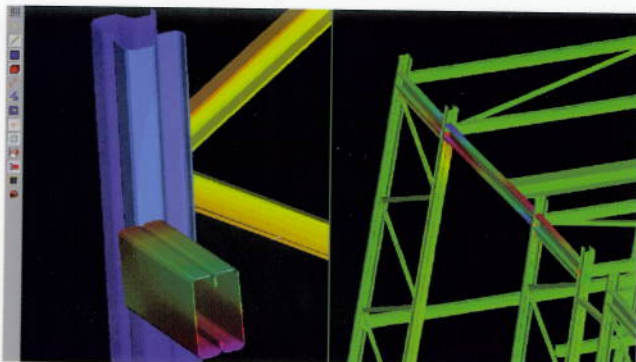
Box girder bridges

The Flügelweg bridge spanning the Elba river in Dresda: a verification of the load carrying capacity of this bridge was performed; a non-linear analysis was employed to evaluate the stability of the structure as well as to investigate the effect of the local buckling shapes in the webs near the supports.



Calculation of Geometrical Properties for User-defined Sections

Includes the shear area, plastic moduli and the torsional constant. The torsional constant is calculated by solving the Laplace equation for torsion in the domain defined by a 2D mesh. In Straus7, any arbitrary section shape can be fully rendered in 3D, including result contouring, providing superior visualisation.



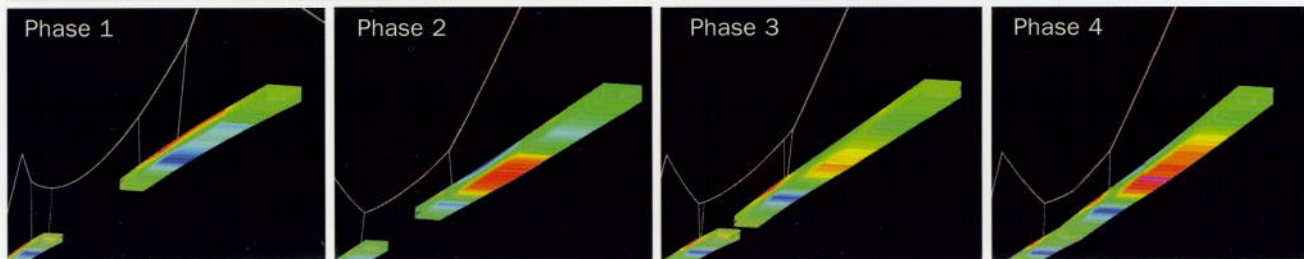
Straus7 worldwide: Straus7 (marketed as Strand7 outside Europe) is used worldwide by thousands of different users. In Italy, it is used by many engineering consulting companies, government organisations and Universities.

Suspension Bridge

Spanning the Chavanon river between Bordeaux and Clermont-Ferrand (F) with a single span of 360m. Straus7 was used to perform various simulations, including pre-tensioning and construction sequences.

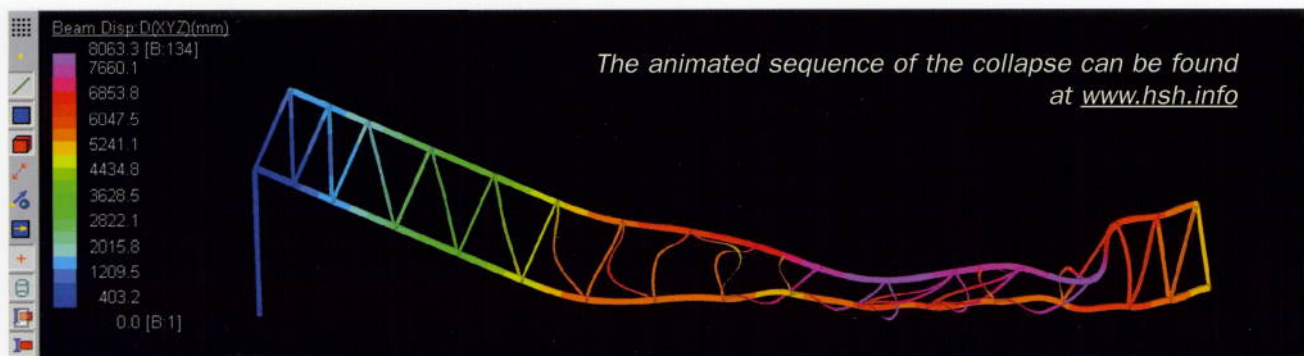


Courtesy of
Studio Giorgio Romaro
Padua - Italy
and Cimolai Spa
Pordenone - Italy



Analysis of a Structural Collapse

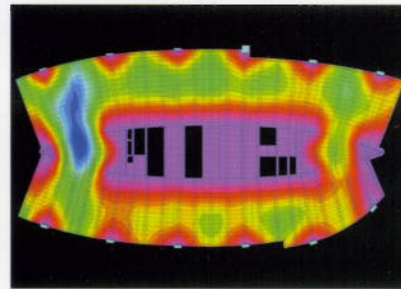
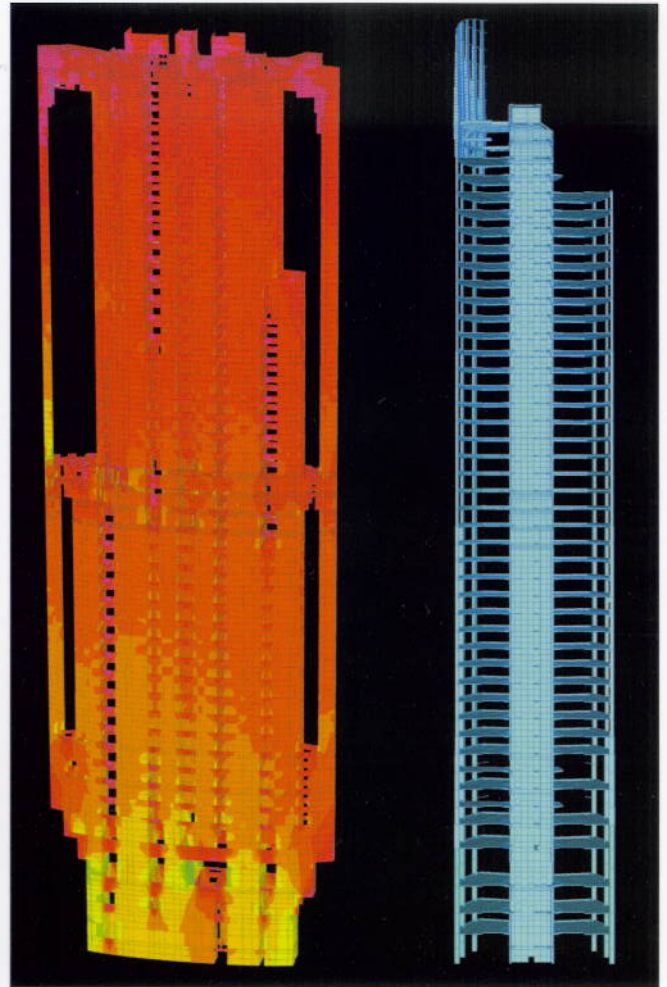
Simulation of the collapse of a truss due to the failure of one of its supports. The figure shows the final step of a material, contact and geometrically non-linear transient dynamic analysis used for the simulation.



Straus7 Verification Manual - Straus7 comes with a 240-page, fully documented and referenced verification manual, for internal QA validation. The distribution CD includes all the Straus7 models used in the manual.

Aurora Place Tower in Sydney analysed by **Straus7**

Renzo Piano's



Send a request to stras7@hsh.info to receive a PDF file of the report by Rocco Bressi, Structural Engineering Design Manager of Bovis Lend Lease, responsible for the project management and structural design of the tower.

Aurora place is a landmark mixed use development situated in the core of Sydney's Central Business District. The project was completed in December 2000 and comprises a 44-level office tower, an 18-level residential building and supporting retail facilities. The architectural design was conducted by the Renzo Piano Building Workshop in Genoa. Structural engineering by Bovis Lend Lease.