NextFEM Designer is a brand new program for Finite Element Analysis designed for structures. It supports linear static, modal, dynamic analyses with beams, trusses, shells with 3 and 4 nodes, solids. It can import pre-existing models from SAP2000, Midas GEN, Abaqus, CalculiX, DXF (geometry only), OpenSees and other formats. There's no limitation on the maximum node number.
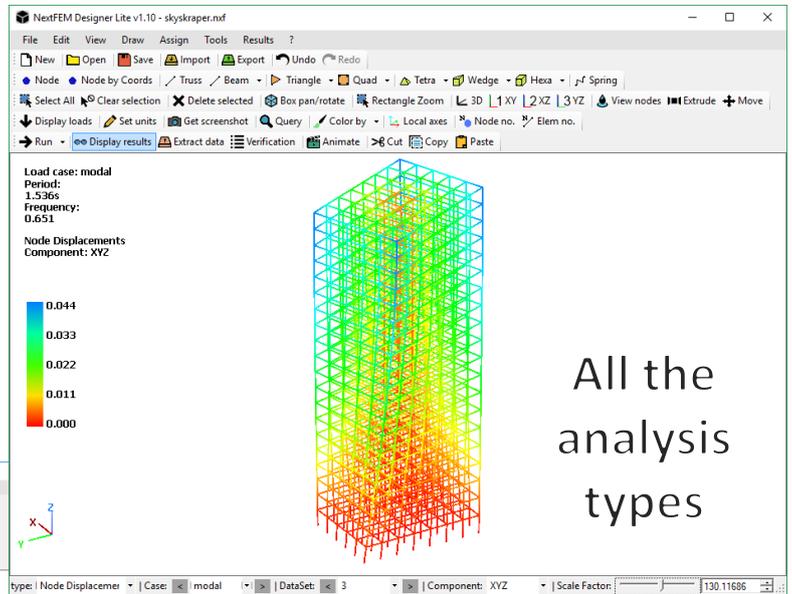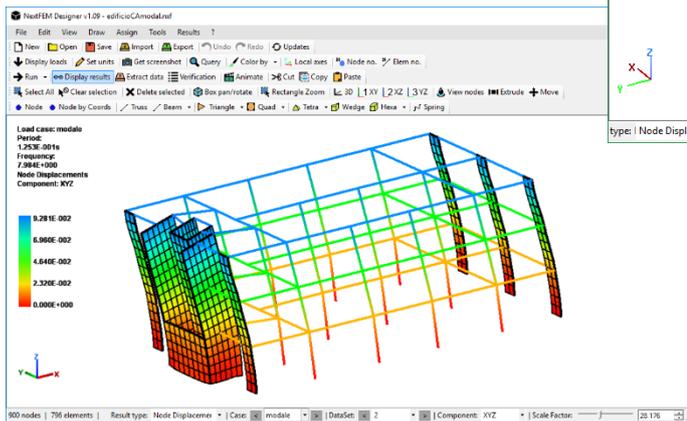

All the analysis types

It can import pre-existing models from SAP2000, Midas GEN, Abaqus, CalculiX, DXF (geometry only), OpenSees and other formats.
Also export is supported to many format, including BIM ones.

The **General Design** module activates in the program some advanced features such as:
- ✓ automatic generation of load combinations as per NTC2008 and Eurocode 3 (EN 1993-1-1) for Ultimate and Serviceability Limit States;
- ✓ checking of steel members as per NTC2008 and Eurocode 3 (EN 1993-1-1);
- ✓ checking of timber frames as per Eurocode 5 (EN 1995-1-1);
- ✓ exporting the model to SAP2000®;
- ✓ exporting the wireframe or extruded model in DXF format;
- ✓ mesher for solid elements.
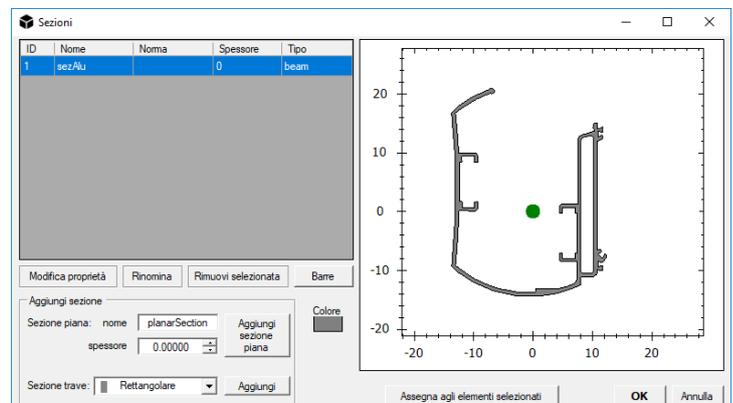
The **AluCheck module** enables the checking of aluminum alloy members as per Eurocode 9 (EN 1999-1-1) in general structures and also in scaffoldings/frameworks.
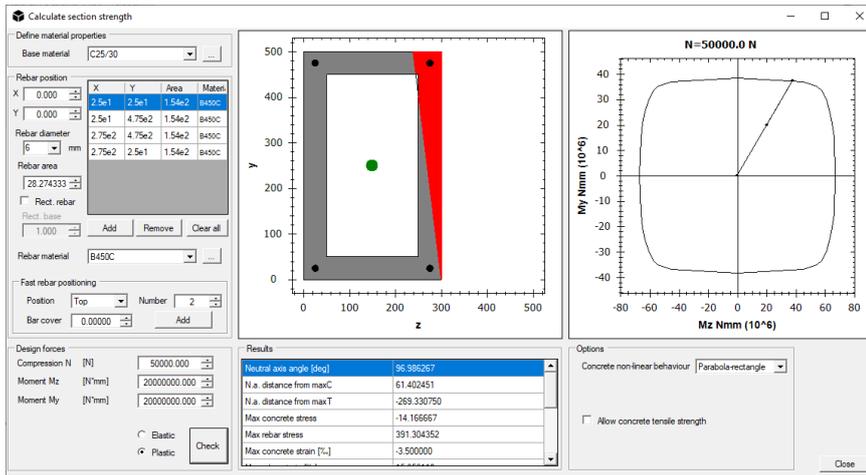
The **Concrete Module** allows to check all the Reinforced Concrete (RC) structures. Firstly, the cross-section calculator is able to calculate all the types of sections, no matter their shape or their base material. For RC sections, the program supports the Parabola-rectangle and the bi-linear non-linear laws, and can account for the concrete tensile strength.
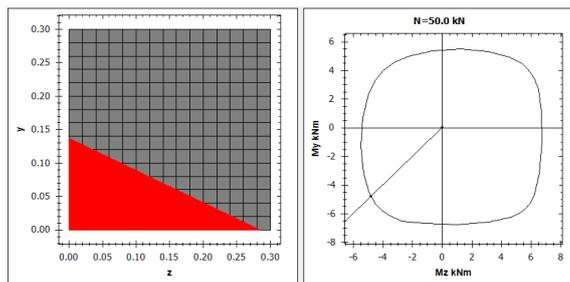
Additionally, this module can perform a strength analysis during a thermal analysis of single section.
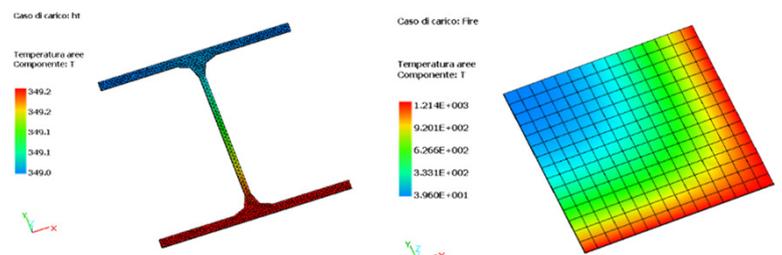
The **Non-Linear module** adds to the program a long series of non-linear elements and hinges, in order to perform static and dynamic analyses.
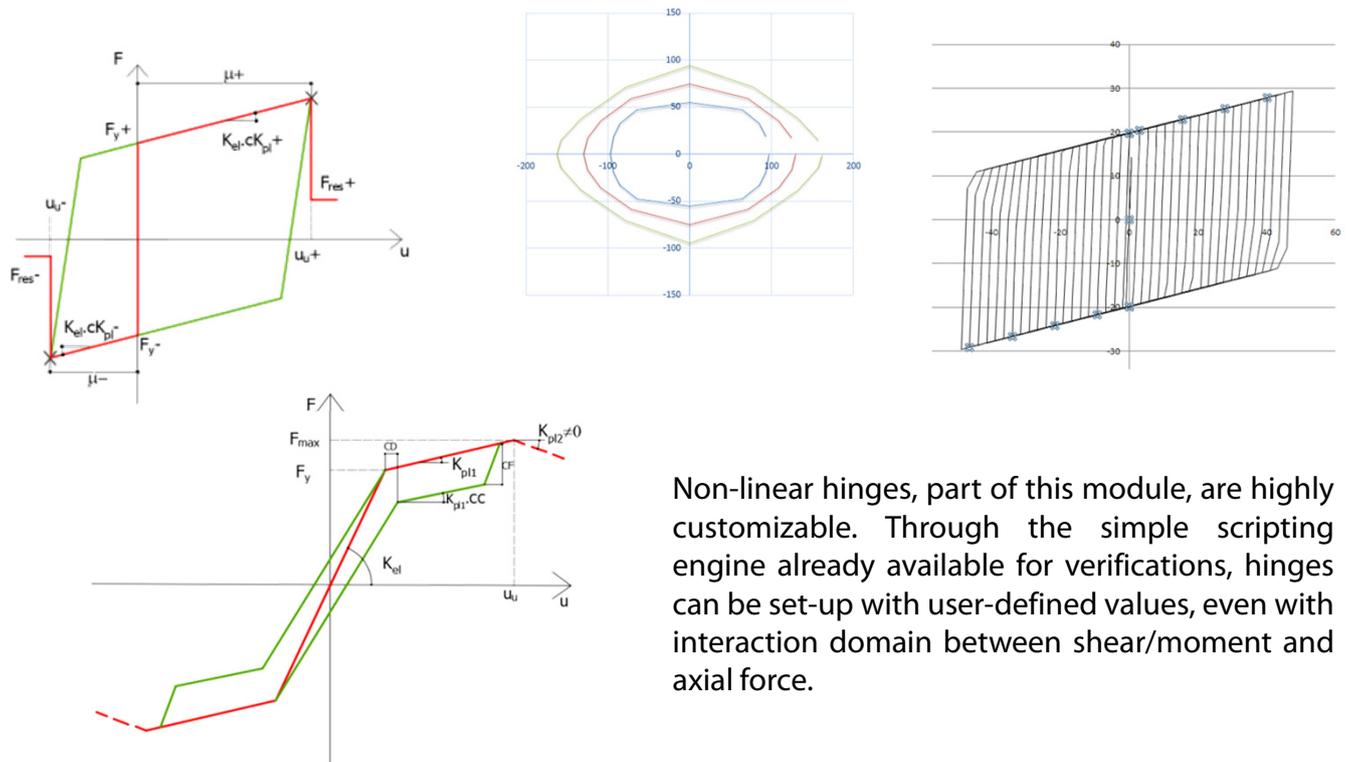
Non-linear hinges, part of this module, are highly customizable. Through the simple scripting engine already available for verifications, hinges can be set-up with user-defined values, even with interaction domain between shear/moment and axial force.