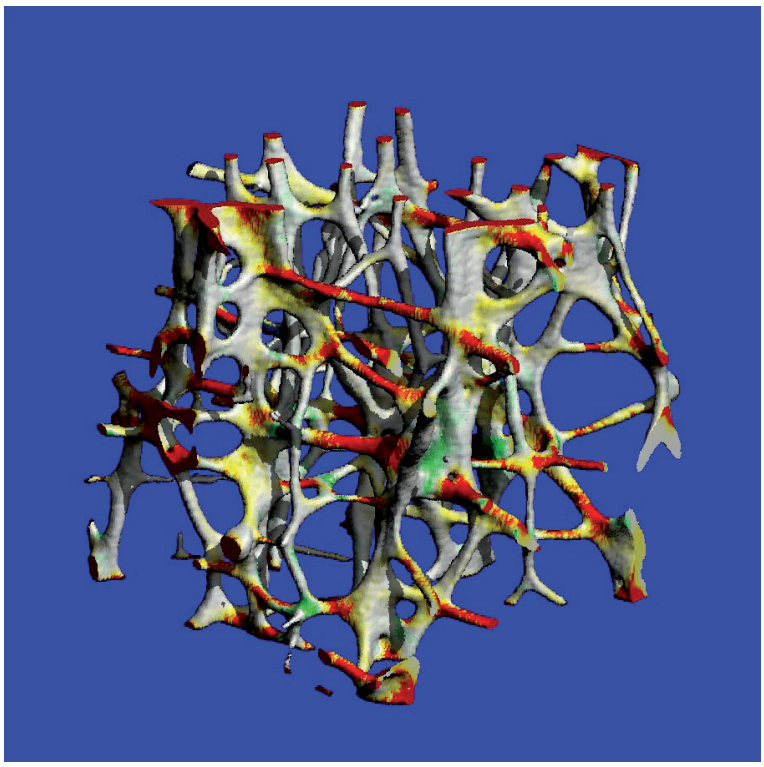
Finite Element Analysis Software



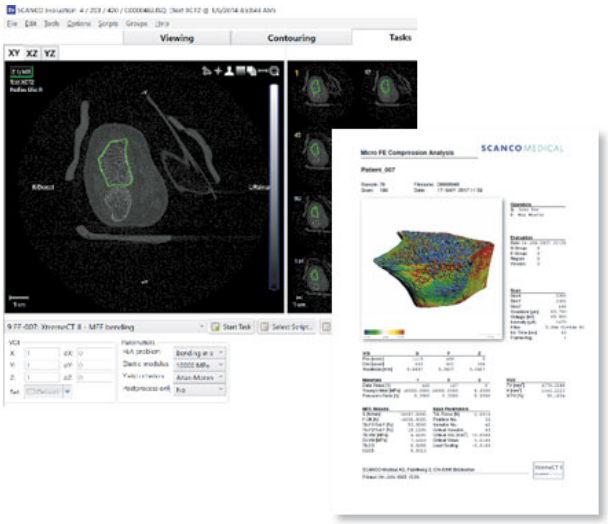
SCANCO MEDICAL

Specifications

Main Features

The Scanco Finite Element software consists of several additional software modules to enable Finite Element (FE) analyses. With this type of analyses it is possible to simulate mechanical tests in order to calculate bone mechanical properties and loading condition. It contains:

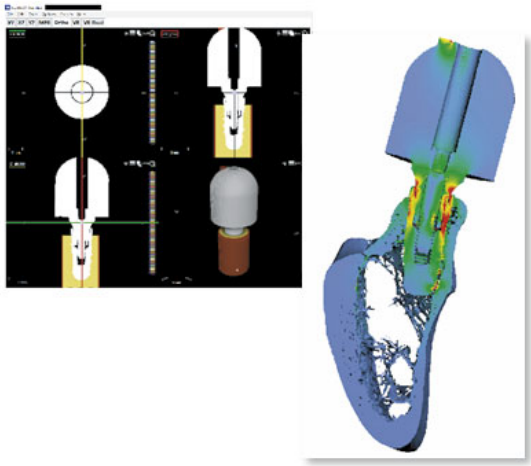
- A solver for linear elastic microstructural finite element analyses
- An export tool to convert micro-CT images to input files for 3rd party FE-solvers
- Tools for pre- and post processing



Finite Element solvers

Main features

- Integrated in the standard evaluation-tasks workflow: FE-analysis can be started with a few mouse clicks
- Contains a built-in library of pre-defined tests (compression, tension, torsion, bending etc.)
- Micro-FE models can represent the actual bone microstructure for linear elastic analysis
- Integrated in Scanco-IPL for scriptable user-defined analysis
- A dedicated result sheet is generated for XtremeCT II analyses
- Parallel processing on the Windows platform

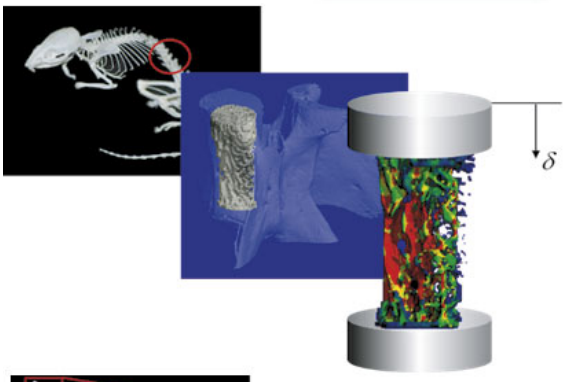


Typical applications for mechanical analysis of XtremeCT images

- Validated approach to measure in-vivo mechanical properties of bone
- Assessment of Stiffness, Failure load and Load distribution
- Assessment of changes in mechanical properties over time

Typical applications for mechanical analysis of vivaCT and microCT images

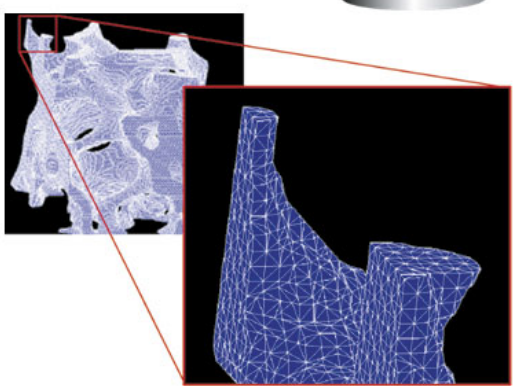
- Simulation of mechanical tests in-vivo from vivaCT images
- Complete characterization of elastic properties of bone samples
- Determination of bone tissue-level loading conditions



Export tool for 3rd party solvers

Main features

- Supports MSC.MARC™, ABAQUS™ and ANSYS™ format
- Voxel conversion and marching tetrahedrons algorithms
- Can generate 1st/2nd order hexahedron/tetrahedron or mixed models
- Built-in library of pre-defined tests
- Can assign voxel density-dependent element material properties to micro-FE analysis



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