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and
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From Reality to Virtuality

BETA CAE Systems International AG

When reality is ahead of the simulation reverse engineering is necessary to create the virtual model out of the physical one. During this workshop the reverse engineering process will be presented with the aid of the tools of BETA CAE SYSTEMS AG, starting from the output data of an industrial tomograph and resulting to a ready to run solver file. If internal structures are equally important as the external surfaces, the use of a tomograph for the 3D scanning is a necessity. RETOMO is the reliable tool for going from tomography voxels to virtual prototypes. With its streamed image processing technology it can process large datasets and deliver effortlessly large FE-Models, ready for pre-processing. Pre-processing involves the creation of a high quality FE-Mesh and the definition of material properties, initial and boundary conditions for the simulation. In our case the simulation will be the virtual compression test of a cubic sample of a cancellous bone. During this workshop we will not only focus on the creation of a simple loadcase, but advanced modelling techniques will be demonstrated as well, by presenting the capabilities of ANSA for model reusability and automation.