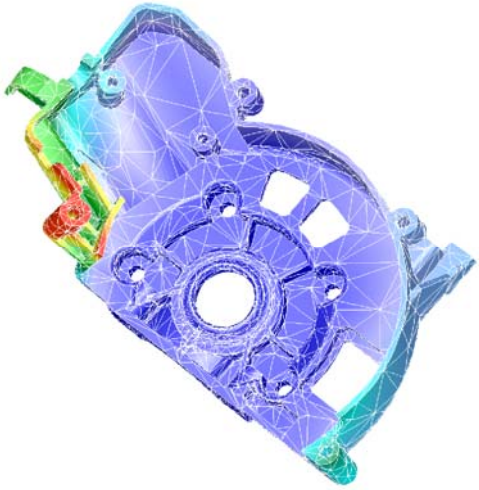
ARIADNE ENGINEERING AB

FEM FOR DESIGN ENGINEERS

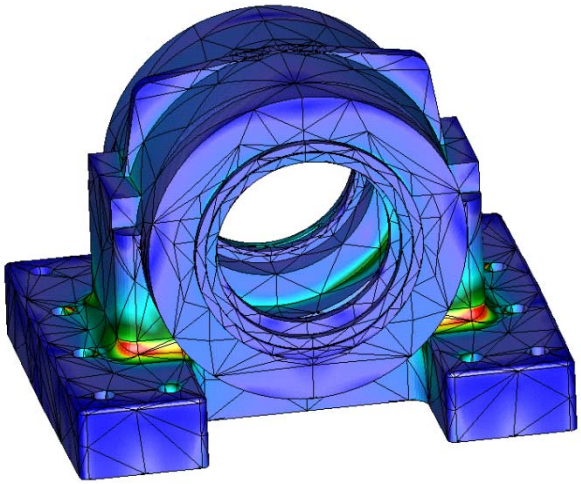
How to cost effectively use FEM analysis to create better products up front.

Topics on the agenda



Day 1
Review of basic concepts in the FEA
Origins and types of FEA errors
Convergence analysis
Accuracy of results, error analysis
Influence of meshing on quality of results
H-code and P-code in FEA
Modeling techniques
Geometry preparation for FE-analysis
Importance of Boundary Conditions
Check List for Result Evaluation
Workshop in the FEA

Day 2
Good and bad FEA practice: real life examples.
Linear static analysis
Modal analysis
Buckling analysis
Thermal analysis
Assembly modeling – Joint Elements, Connections, Fasteners
What is simple and what is difficult in FEA – choosing proper task for design engineer
Nonlinear analysis – Large Deformation
Workshop in the FEA



Day 3
Nonlinear analysis – Contact
Nonlinear analysis – Plasticity
Parameter sensitivity studies
Optimization with FEA
Interactive Design-FEA process
Interfacing with CAD
Experimental verification of FEA results
FEA project management
Common misconceptions and traps of the FEA
Quality assurance
Workshop in the FEA
FEA quiz