



NUMERICAL MODELLING AND SIMULATION

The simulation, numerical analysis and finite element modelling of mechanical problems occurring in the development of engineering structures and equipment is a crucial task for today's engineers. Using modern computer simulation and numerical modelling environments, remarkable savings can appear. We offer educational and research capacity and know-how in this ever more popular field based on decades of experience in higher education and cooperation with industry.

COMPETENCIES

- Strength analysis, finite element modelling and simulation
- Dynamic analysis, finite element modelling and simulation
- Numerical modelling and simulation of multi-field problems
- Numerical modelling and simulation of multi-body systems



SERVICES

- Strength analysis of engineering structures and equipment
- Dynamic analysis of engineering structures and equipment
- Finite element modelling and simulation of multi-field problems
- Numerical simulation of multi-body problems



TOOLS

- Numerical simulation environment on a high capacity workstation
- Abaqus Simulation System Educational/Research license
- Altair Hyperworks/Hypermesh Simulation System Educational/Research license
- SciLab Mathematical Simulation Program



REFERENCES

- MOL Nyrt.: Numerical simulation of geomechanical behaviour of non-convectonal reservoir, finite element modelling of hydraulic fracture propagation
- Mátrai Erőmű Zrt.: Strength analysis of bucket ladder excavator, development of new bucket using finite element modelling and simulation
- DKG EAST Olaj- és Gázipari Berendezéseket Gyártó Zrt.: Strength and deformation analysis of industry size ball pivot with finite element method
- Mátrametál Kft.: Computer aided modelling and finite element analysis of development of aerosol cans