



## CAD and FEM Laboratory

### Principal goals and activities

Design, development and optimisation of various components of prototypes, serial-production or other products, mechanisms and equipment (modelling, simulation, analyses, technical documents).

### General focus of laboratory

- Custom-built computer laboratory for design, calculation and development activities.
- Support to training of bachelor, master and doctoral students.
- Computer support from an authorised CAD training centre.

### Offer of technology and expertise

- Virtual modelling and measurement.
- Design and optimisation of machine components, mechanisms and complete equipment.
- Mathematical and numeric analyses.

### Specifická zařízení a výstupy

- Various software applications for virtual and computer-assisted design in 2D, 3D (CAD).
- Creo 2.0, Pro/E, Catia V5, V6, Inventor, AutoCad, SolidWorks, etc.
- Various software applications for mathematical and numeric analysis (CAE).
- Creo 2.0, Pro/E, Catia V5, V6, Inventor, AutoCad, SolidWorks.

### Offer of technology and expertise

- Virtual modelling and measurement.
- Design and optimisation of machine components, mechanisms and complete equipment.
- Mathematical and numeric analyses.
- Calculations of machine parts, homogeneous and heterogeneous structures (anisotropic materials, fibre structures, composites, macro- and micro-levels), studies of damage and plasticity of materials, electromechanical simulations, studies of agricultural structures and crops, etc.

