



Professor Laura De Lorenzis

«I find it fascinating to gain a deeper understanding of complex phenomena using mathematical models. In a way, we create virtual copies of reality, which we can use for our experiments.»

Professorship for Computational Mechanics

Institute for Mechanical Systems

We develop mathematical models and computational frameworks to describe complex mechanical processes and to optimize materials, processes and structural designs.

To achieve highest accuracy and efficiency, we use modern simulation methods and develop them further. In addition, we validate our models through experiments – either in collaboration with international partner labs or with our own testing setups.

Focus

- Fracture and fatigue
- Contact, friction and wear
- Additive manufacturing processes
- Data-driven and synergetic approaches

Tools and methods

- Multiscale and multifield modeling
- High-performance computing
- Computed tomography and mechanical testing

Further details will follow soon on:

www.compmech.ethz.ch

