Chair for Computation in Engineering
Deparment of Civil, Geo and Environmental Engineering
Technical University of Munich

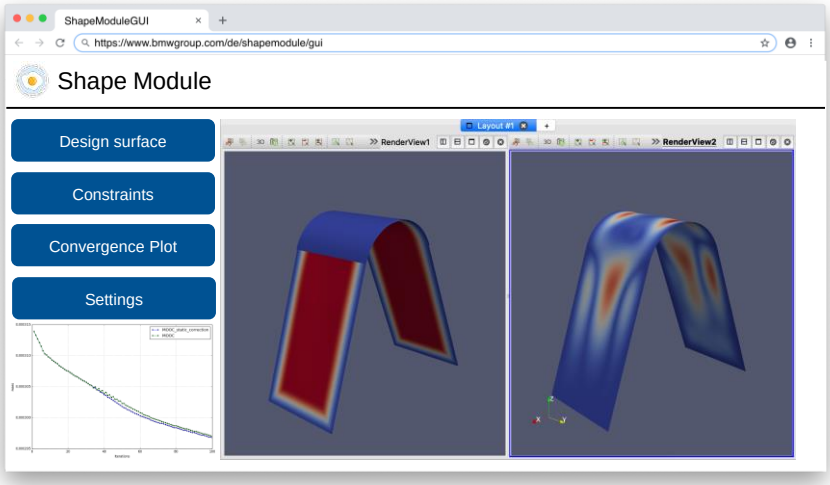
A browser-based 3D viewer for shape optimization

Project Characteristics

Modeling:	★★☆☆☆
Mathematics:	★★☆☆☆
Programming:	★★★★☆
Science:	★★★☆☆

Setting:

"BMW Shape Module" is a solver-independent shape optimization framework for engineering design.
In this project the browser-based GUI of Shape Module will be enhanced with a 3D-viewer and advanced visualization features for a better user experience.



Your Tasks:

- Extracting the geometry and other necessary information from the simulation input/output data.
- Prepare python-based scripts for Paraview to visualize :
  - Design surface;
  - Non-penetrative contact geometries;
  - Feasible and infeasible sub-space for geometrically-constrained optimization;
  - Optimization settings;
  - Convergence graphs;