

ELiSE Engineering offers you a wide spectrum of engineering services. A strong interaction within the areas of construction, calculation and optimization forms a suburb basis for the development of efficient and customer-oriented lightweight design solutions.



CAE

CAD constructions properly defined for optimizations problems enable a bidirectional data exchange within FEA and optimization programs. Depending on the requirements we can conduct static and/or dynamic analysis as well as CFD, crash and multiple-body simulations.

- CAD constructions with CATIA, SolidWorks & Rhino
- FEA-simulations with ANSYS, HyperWorks, LS-DYNA
- Simulation of NVH, acoustics, CFD and crash optimization

Optimization

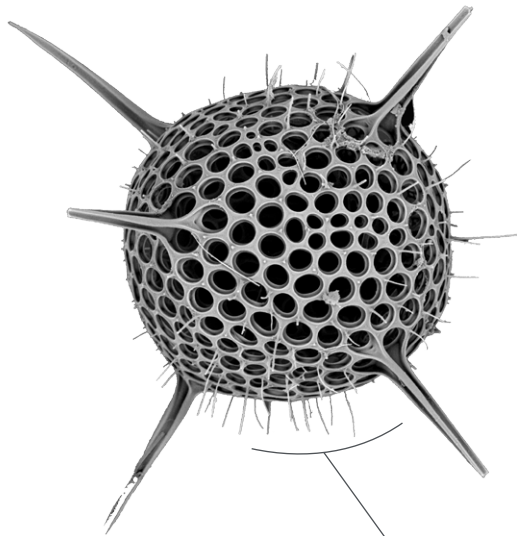
The application of parametric optimizations allows the variation of angles, wall thicknesses, amount of ribs or the orientation of surfaces. Through powerful evolutionary algorithms we are able to reveal the optimal parameters. Topography and corrugation optimizations give your product the finishing touch.

- Bionic topology-, topography- and corrugation optimization
- Parametric optimization with DoE and evolutionary algorithms
- Structural design and optimization

Automatization

For optimal performing lightweight structures the departments constructions and optimizations have to work hand in hand. Furthermore, next to commercial interfaces, in-house developments are utilized for a stable performance of closed CAD-, FEA-, and optimization loops.

- Optimization loops of CAD and FEA (Simulation driven design)
- Automation of CAD and FEA development processes
- Interface programming (Python, C++, VB, APDL, TCL)



Hexacontium spec.

 **ELiSE**
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