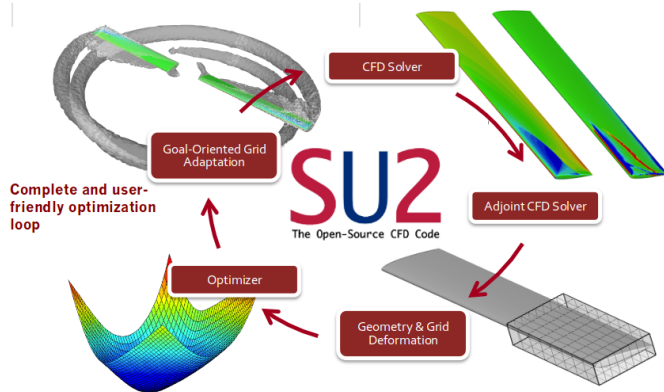


Hiwi-Job

Computational Analysis and Design

The Chair for Scientific Computing (SciComp) at TU Kaiserslautern is part of the international development team of SU2 (<http://su2.stanford.edu>). The SU2 suite is an open-source collection of software tools written in C++ (and Python) for performing Partial Differential Equation (PDE) analysis and solving PDE-constrained optimization problems. The toolset is designed with computational fluid dynamics and aerodynamic shape optimization in mind, but it is extensible (and has been extended) to treat arbitrary sets of governing equations such as electrodynamics, chemically reacting flows, and many others.



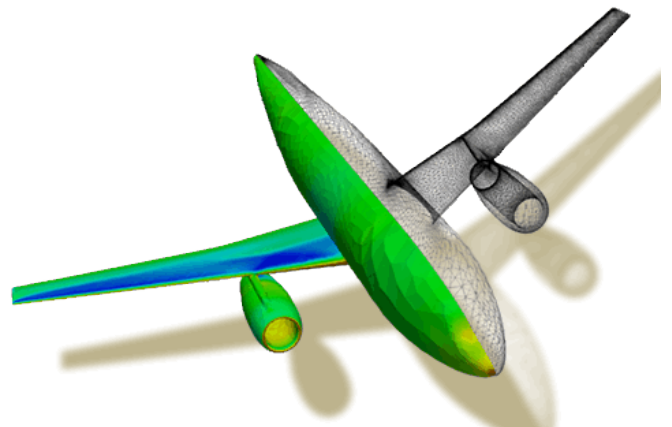
We are looking for motivated students to support us in the development, testing and maintenance of modules related to the automatic computation of accurate gradients inside SU2 utilizing the Complex-Step method and Algorithmic Differentiation (AD).

Your responsibilities can include:

- Independent conduction of optimization problems
- Implementations in SU2 or in the underlying AD libraries
- Documentation and preparation of user tutorials

Your profile:

- Student in Mathematics, Computer Science or Mechanical Engineering
- Programming skills in C++ (and Python, but this is not mandatory)
- Interest in numerics and industrial applications of computational fluid dynamics and optimization



If you are interested, just come by my office (36-410) or write me an email (tim.albring@scicomp.uni-kl.de). The working hours are flexible and can be adjusted to your curriculum. The work can also very well be followed by a bachelor/master thesis.