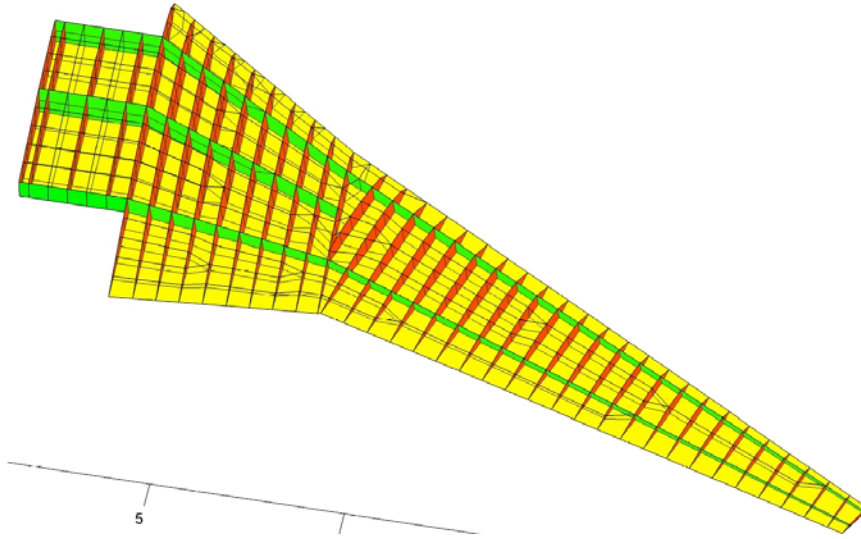# Model generator for parametric Aircraft Global-FEM

The Institute of Robotics and Mechatronics with its site in Oberpfaffenhofen is specialized in the field of interdisciplinary (virtual) design, computer-aided optimization and simulation, as well as implementation of complex mechatronic systems and man-machine interface. The Flight Dynamics and Control group's research activities are focussed on load analysis and load control design for contemporary civil aircraft configurations.

Wing – FE model

The aim of this project is the development of a model generator for parameterized Aircraft Global-FEM models. Besides geometric modelling aspects the application of model reduction techniques has to be considered.

Tasks

- Getting familiar with the task
- Build-up of a graphical user interface (GUI) for specifying the parametric FE-model
- Implementing functionalities for model reductions techniques (Guyan, Craig-Bampton, etc.)
- 3D-Visualization of the FE-model
- Write MSC Nastran input deck
- Implementation of test examples
- Programming language: MatLab or Python

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