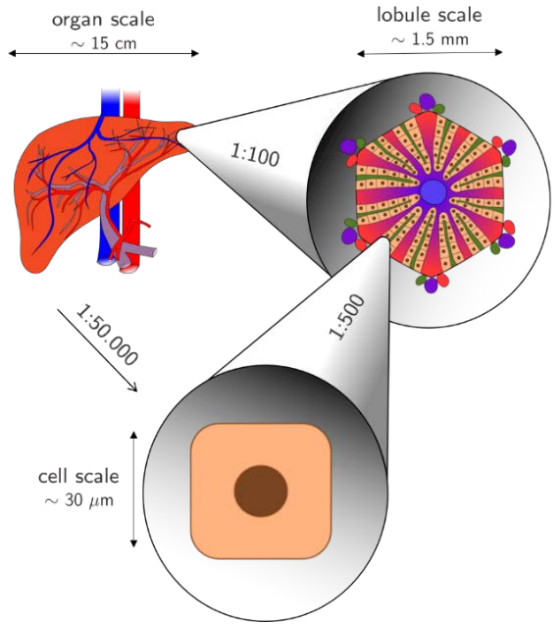
Universität Stuttgart

Institut für Statik und Dynamik der
Luft- und Raumfahrtkonstruktionen
Prof. Dr.-Ing. Tim Ricken

Numerical Simulation of Growth Effects in the Human Liver

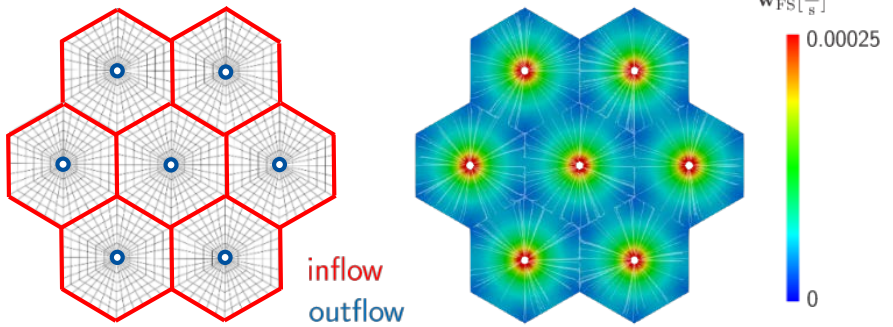
Motivation

- Numerical Multiscale Simulation of tumor growth in the liver using the Theory of Porous Media (TPM)
- Basis for clinical application



Possible topics (Bachelor's or Master's thesis)

- Investigation of the influence of boundary conditions on hepatic growth processes
- Parameter study to investigate the influence of various factors on growth processes
- Validation of simulation results with clinical data
- Extension of the model by one additional component



Prior knowledge of the following is of advantage:

- Numerical simulations
- FEM (Einführung in die FEM, Numerik)
- Programming experience

Editor:
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Please don't hesitate to contact us for further information.

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