University of Stuttgart
Germany

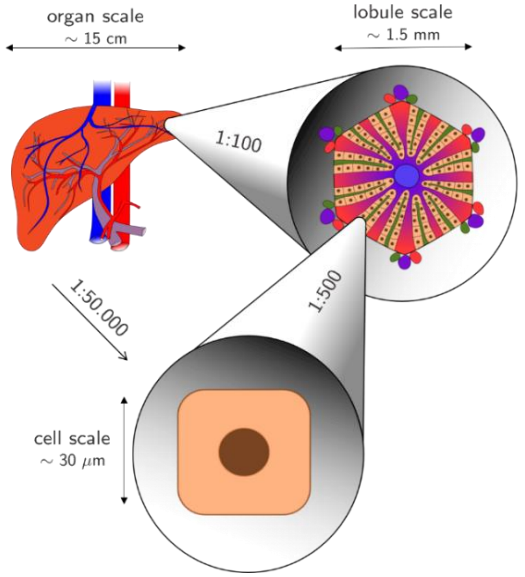
Institute of Mechanics, Structural Analysis
and Dynamics of Aerospace Structures

Prof. Dr.-Ing. Tim Ricken

Hybrid Data- and Knowledge-Driven Methods in Liver Modeling

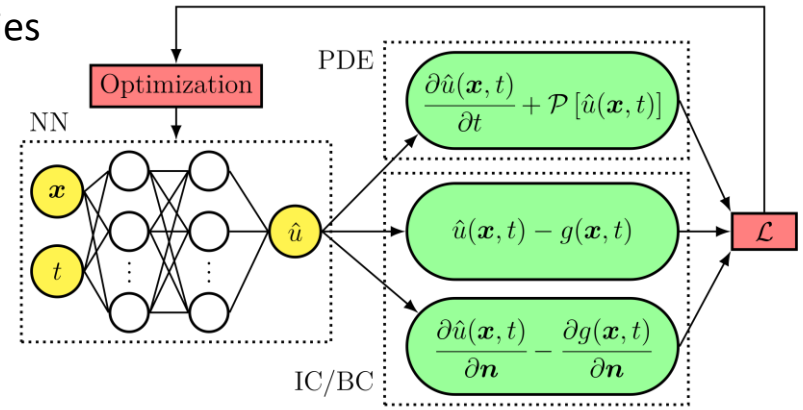
Motivation

- Numerical multiscale simulation of different processes in the human liver using the Theory of Porous Media (TPM)
- Integration of patient-specific data as basis for clinical application
- Optimization through hybrid methods to accelerate the diagnostic process



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

- Development and application of hybrid methods for multiscale coupling
- Preparation of hybrid methods for use as surrogate model and for model order reduction
- Execution and evaluation of parameter studies



Prior knowledge of the following is of advantage:

- Numerical simulations
- Machine Learning
- Programming experience

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

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