Chair of Computational Modeling and Simulation
TUM School of Engineering and Design
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Regularization of ultrasonic waveform inversion

Project Characteristics

Modeling:	
Mathematics:	
Programming:	
Science:	
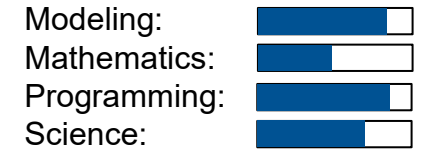
Task

- **Objective**: Regularization of the ultrasonic full waveform inversion

- Develop a finite difference based full waveform inversion (FWI) framework

- FWI is inherently ill posed problem which makes regularization important for reaching a physically meaning full minima

- Adding rules or constraints to prevent a model from overreacting to noisy or insufficient data.

- Tikhonov regularization, Total variation regularization, Implicit regularization etc