

Workshop
“Optimal approximation spaces for multiscale problems”

February 23 - 27, 2026

organized by
Moritz Hauck and Johan Wärnegård

Time measurement: CET

• **Monday, February 23**

08:30 - 09:00	<i>Arrival and Self-Registration</i>
09:00 - 09:10	<i>Welcome by HIM Director Stefan Müller</i>
09:10 - 10:00	Lucia Swoboda <i>Existence of Solutions for Geometrically Nonlinear Cosserat Beam Networks</i>
10:00 - 10:45	<i>Coffee break</i>
10:45 - 11:30	Joseph Holten <i>Domain Decomposition Methods for Elastic Wave Propagation</i>
11:30 - 14:30	<i>Lunch break</i>
14:30 - 15:30	Florian Schaefer <i>Toward Information Geometric Mechanics</i>
15:30 - 16:00	<i>Coffee break</i>
16:00 - 17:00	Axel Målqvist <i>Numerical simulation of beam network models</i>
from 17:15 on	<i>Get-Together</i>

• **Tuesday, February 24**

09:00 - 10:00	Peter Bastian <i>Practical aspects of some spectral domain decomposition methods</i>
10:00 - 10:45	<i>Coffee break</i>
10:45 - 11:30	Charles Beall <i>A randomized Greedy algorithm with certification over the entire parameter set</i>
11:30 - 14:30	<i>Group Photo and Lunch break</i>
14:30 - 15:15	Maher Khrais <i>Adaptive Iterative Numerical Homogenization for Quasilinear Nonmonotone Elliptic PDE</i>
15:15 - 16:00	<i>Coffee break</i>
16:00 - 16:45	Malin Mosquera <i>A Localised Orthogonal Decomposition Method for Heterogeneous Mixed-Dimensional Problems</i>

• **Wednesday, February 25**

09:00 - 10:00	Daniel Peterseim <i>Multiscale Random Fields on Quantum Computers</i>
10:00 - 10:45	<i>Coffee break</i>
10:45 - 11:45	Christian Döding <i>Resolving Vortex Lattices in Type-II Superconductors with Multiscale Techniques</i>
11:45 - 14:30	<i>Lunch break</i>
14:30 - 15:15	Dilini Kolombage <i>Subspace Decomposition Preconditioning with Offline-Online Approximation for Random Defect Models</i>
15:15 - 16:00	<i>Coffee break</i>
18:30	Workshop dinner at Brauhaus Bönnsch

• **Thursday, February 26**

09:00 - 10:00	Alexei Lozinski <i>Higher order MsFEM for Stokes equations on a perforated domain</i>
10:00 - 10:45	<i>Coffee break</i>
10:45 - 11:30	Christian Alber <i>Grassmannian Interpolation of Parametric Local Approximation Spaces</i>
11:30 - 14:30	<i>Lunch break</i>
14:30 - 15:15	Felix Krumbiegel <i>An enriched higher-order numerical homogenization method for acoustic waves</i>
15:15 - 16:00	<i>Coffee break</i>
16:00 - 17:00	Johannes Storn <i>Randomized Projection Operators onto Piecewise Polynomial Spaces</i>

• **Friday, February 27**

09:00 - 10:00	Johannes Kraus <i>Parameter-robust multilevel block factorization preconditioners based on domain decomposition</i>
10:00 - 10:45	<i>Coffee break</i>
10:45 - 11:30	Sara Avesani <i>Multiscale scattered data interpolation in sample coordinates</i>