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18th SFB Internal Meeting

Obergurgl, Austria
December 2 – 5, 2025

Schedule

Tuesday, December 2

14:00 – 18:00 Individual Arrival

18:00 – 19:30 **Welcome Dinner**

19:30 – 20:30 **Evening Session**
Chairing: Gerhard Schütz

19:30 – 19:50 *Refractive index mapping below the diffraction limit*
Gerhard Schütz

19:55 – 20:15 *Orientation estimation of fixed dipole emitters in cryoSMLM*
Montse Lopez

20:30 – 21:30 **Meeting of the Principal Investigators**

Wednesday, December 3

09:00 – 12:00 **Morning Session**
Chairing: Otmar Scherzer & Wolfgang Drexler

09:00 – 09:30 *Can reproducing kernel Banach spaces deliver theory-driven performance?*
Jose Iglesias Martínez

09:40 – 10:10	<i>New solutions and aspects of evolution equations</i> <i>Konstantinos Kalimeris</i>
10:15 – 10:45	Break
10:45 – 11:05	<i>A Selection of Unpresented Works: An SFB Retrospective</i> <i>Simon Hubmer</i>
11:10 – 11:30	<i>Quantitative PAT-OCT Elastography in phantoms and biopsies</i> <i>Ekaterina Sherina</i>
11:35 – 11:55	<i>Quantitative Parameter Reconstruction from Optical Coherence Tomography and Elastography</i> <i>Lisa Krainz</i>
12:00 – 17:00	Lunch Break & Group Discussion
17:00 – 18:00	Afternoon Session Chairing: Ronny Ramlau
17:00 – 17:20	<i>Pressure beneath a periodic travelling water-wave in vorticity flow</i> <i>Nicolas Gindrier</i>
17:25 – 17:45	<i>Regularization using Wavelets for Finite-Dimensional Approximation</i> <i>Christina Strohmer</i>
18:00 – 19:30	Dinner
19:30 – 20:30	Meeting of the SFB Members

Thursday, December 4

09:00 – 12:00	Morning Session Chairing: Glenn Van de Ven
09:00 – 09:30	<i>Nonlinear Waves in Rotational Inviscid Flow: A Perturbation Expansion Approach</i> <i>Dimitrios Razis</i>
09:35 – 09:55	<i>Mock data no more: the first application of 3D modelling for galaxy kinematics</i> <i>Prashin Jethwa</i>
10:00 – 10:20	Break
10:20 – 10:40	<i>Reconstructing orbit distributions from mock observations</i> <i>Stefanie Reiter</i>
10:45 – 11:05	<i>Regularization by projection: A supervised learning approach in extragalactic archaeology</i> <i>Manuel Canizares</i>
11:10 – 11:30	<i>Projection-Based Feature Extraction and Regularization</i> <i>Ioannis Martikos</i>

11:35 – 11:55	<i>A Comparison Study of Nearly-Incompressible Hyperelastic Models for Elastography</i> <i>Zheyi Yang</i>
12:00 – 17:00	Lunch Break & Group Discussion
17:00 – 18:00	Afternoon Session Chairing: Monika Ritsch-Marte
17:00 – 17:20	<i>Theory of Motion Reconstruction in Optical Tomographic Imaging: A Retrospective</i> <i>Denise Schmutz</i>
17:25 – 17:45	<i>Motion detection via the common circle method for experimental data</i> <i>Michael Quellmalz</i>
18:00 – 19:30	Dinner

Friday, December 5

09:00 – 12:00	Morning Session Chairing: Peter Elbau
09:00 – 09:30	<i>On the numerical solution of a coupled physics transmission problem</i> <i>Leonidas Mindrinos</i>
09:35 – 09:55	<i>Soft X-Ray metrology for 3D profilometry of semiconductor devices</i> <i>Fabian Hinterer</i>
10:00 – 10:20	<i>Mathematical Modeling of a Reciprocating Compression System</i> <i>Leopold Veselka</i>
10:25 – 10:45	Coffee Break
10:45 – 11:05	<i>Numerical Studies of Full Waveform Inversion: Linear and Nonlinear Models for Heterogeneous Media</i> <i>Huidong Yang</i>
11:10 – 11:30	<i>Inverse Scattering with Internal Sources: A Maxwell's Equations Perspective</i> <i>Yakun Dong</i>
11:35 – 11:55	<i>Progress on the refractive index recovery from OCT for non-parallel planes</i> <i>Cristobal Villalobos Guillén</i>
12:00 – 13:00	Lunch
13:00	Departure