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The 17th Internal SFB Meeting

Obergurgl, Austria
December 3 – 6, 2024

Program

Tuesday, December 3

16:00 – 18:00 Individual Arrival

18:00 – 19:30 **Dinner**

19:30 – 20:30 **Evening Session**
Chairing: Otmar Scherzer

19:30 – 19:55 *Updates on Fourier-type wavefront sensing for ophthalmology and astronomy*
Victoria Laidlaw

20:00 – 20:25 *(online) TBA*
Elisabeth Brunner

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

Wednesday, December 4

09:00 – 12:00 **Morning Session**
Chairing: Peter Elbau

09:00 – 09:40 *Super-resolution in inverse scattering*
Giovanni S. Alberti

09:45 – 10:20 *The prospects of dedicated PSF models for crowded-field photometry and spectroscopy*
Sebastian Kamann

10:20 – 10:40 **Coffee Break**

- 10:40 – 11:00 *Update on Quantitative PAT-OCT-Elastography*
Lisa Krainz
- 11:05 – 11:25 *TBA*
Ekaterina Sherina
- 11:30 – 11:50 *Optical coherence and photoacoustic microscopy for 3D cancer model imaging*
Shiyu Deng
- 12:00 – 16:45 **Lunch Break and Group Discussions**
- 16:45 – 18:00 **Afternoon Session**
Chairing: Wolfgang Drexler
- 16:45 – 17:05 *TBA*
Cristóbal Villalobos Guillén
- 17:10 – 17:30 *Phaseless Inverse Scattering*
Christina Strohmer
- 17:35 – 17:55 *Circle Fitting on a Tilted Plane with Directional Measured Variances*
Yakun Dong & Zheyi Yang
- 18:00 – 19:30 **Dinner**
- 19:30 – 20:30 **Meeting of the SFB Members**

Thursday, December 5

- 09:00 – 12:00 **Morning Session**
Chairing: Monika Ritsch-Marte
- 09:00 – 09:40 *Invited Talk III*
Bernhard Baumann
- 09:45 – 10:10 *Development of acoustofluidic devices for contact-less handling and tomography*
Mia Kvale Lovmo
- 10:10 – 10:40 **Coffee Break**
- 10:40 – 11:00 *Acoustic lattices using active diffraction gratings*
Darby Paez Amaya
- 11:05 – 11:25 *An attempt to model ULTIMA-OCT*
Denise Schmutz and Peter Elbau
- 11:30 – 11:50 *Generalized Fourier Diffraction Theorem and Filtered Back-propagation for Tomographic Reconstruction*
Michael Quellmalz
- 12:00 – 17:00 **Lunch Break and Group Discussions**
- 17:00 – 18:00 **Afternoon Session**
Chairing: Ronny Ramlau
- 17:00 – 17:20 *Time-Harmonic Optical Flow*

- Oleh Melnyk
 17:25 – 17:55 *Invited Talk IV*
Invited Speaker
 18:00 – 19:30 **Dinner**

Friday, December 6

09:00 – 12:00 **Morning Session**
 Chairing: Glenn van de Ven

- 09:00 – 09:25 *The SCD semismooth* Newton method for Tikhonov functionals*
Simon Hubmer
 09:30 – 09:55 *Galaxy reconstructions with the PNKR algorithm*
Prashin Jethwa
 10:00 – 10:20 **Coffee Break**
 10:20 – 10:40 *How to select your galaxy sample*
Stefanie Reiter
 10:45 – 11:00 *TBA*
Ioannis Martikos
 11:05 – 11:25 *Singular Value and Frame Decomposition-based Reconstruction for Atmospheric Tomography*
Lukas Weissinger
 11:30 – 11:50 *Atmospheric Tomography in Ground-based Astronomy*
Yutong Wu
 12:00 – 13:00 **Lunch**
 13:00 **Departure**