

universität
wien

SFB F68 - Tomography Across the Scales

Thirteenth Internal Meeting

Villa Sonnwend, 12.02.2023 – 15.02.2023

Programme

Sunday, 12 February 2023

19:00 – 20:00 *Opening Dinner*

Monday, 13 February 2023

Session: “**Extragalactic Archaeology**”
Chair: Glenn van de Ven (University of Vienna)

09:00 – 09:30 **Latitudinal Dynamics of Charged Dust in the Heliosphere**
Stefanie Reiter (University of Vienna)

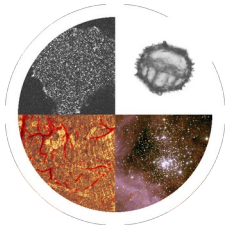
09:30 – 10:00 **Uncertainty-Aware Blob Detection for Extragalactic Archeology**
Fabian Parzer (University of Vienna)

10:00 – 10:30 ~ *Coffee Break* ~

10:30 – 12:00 **Collaborative Discussions**
Session: “**Extragalactic Archaeology**”
Participant groups: SP5, SP7 and SP11
Short Talk: Updates and Roadmap for Extragalactic Archaeology
Prashin Jethwa (University of Vienna)

12:00 – 13:30 ~ *Lunch Break* ~

13:30 – 14:30 *PI Meeting (PIs, Coordinator, and Speakers of the SFB members only)*



Session: **“Superresolution Microscopy”**

Chair: Otmar Scherzer (University of Vienna)

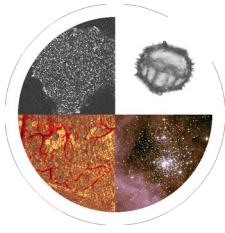
- 14:30 – 14:50** **Pulse Wave Splitting in the Human Brain**
Lukas Weissinger (RICAM)
- 14:50 – 15:10** **Diffraction Tomography: Elastic Parameters Reconstruction using PP Mode**
Bochra Mejri (RICAM)
- 15:10 – 15:30** **Phase-Contrast THz-CT for Non-Destructive Testing**
Simon Hubmer (RICAM)
- 15:30 – 17:00** **Sub-projects Collaborative Discussions**
Session: **“Superresolution Microscopy”**
Participant groups: SP5, SP7, SP9 and SP10
Short Talk: New Simulation Results for Single Molecule Localisation Microscopy
Fabian Hinterer (JKU Linz)
Short Talk: An Update on Cryo-SMLM Astigmatic Imaging
Montserrat López Martínez (TU Wien)
- 18:00 – 19:00** ~ Dinner ~
- 19:00 – 20:00** *Member Meeting (SFB members only)*

Tuesday, 14 February 2023

Session: **“Adaptive Optics” and “Imaging of Trapped Particles”**

Chair: Wolfgang Drexler (Medical University of Vienna)

- 09:00 – 09:20** **Asymmetry Conditions for Unique Motion Reconstruction in Parallel-Beam and Diffraction Tomography**
Denise Schmutz (University of Vienna)
- 09:20 – 09:40** **Novel Aspects for Ophthalmic Adaptive Optics**
Elisabeth Brunner (Medical University of Vienna)



09:40 – 10:00 **Updates on AO for Ophthalmology – Fourier-type Wavefront Sensing and Wide-Field AO-OCT**
Victoria Hutterer (JKU Linz)

10:00 – 10:30 ~ Coffee Break ~

10:30 – 12:00 **Parallel Discussions**

Session: **“Adaptive Optics”**
Participant groups: **SP3, SP5 and SP11**

Session: **“Imaging of Trapped Particles”**
Participant groups: **SP4, SP6, SP7 and SP10**
Short Talk: Update on Diffraction Tomography
Michael Quellmalz (TU Berlin)
Short Talk: Strategies for Reconstruction of Trapped Particles
Mia Kvåle Løvmo (Medical University of Innsbruck)

12:00 – 13:30 ~ Lunch Break ~

13:30 – 18:00 **Collaborative Discussions**

18:00 – 19:00 ~ Dinner ~

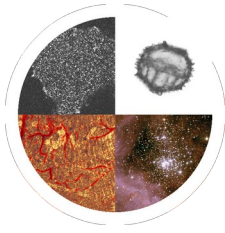
Wednesday, 15 February 2023

Session: **“Quantitative Medical Elastography and Diagnostics Tissue Optics”**
Chair: **Ronny Ramlau (JKU Linz and RICAM)**

09:00 – 09:25 **Scattering for Biharmonic Operator with Quasi-Linear Perturbations**
Jaakko Kultima (University of Oulu)

09:25 – 09:45 **Reconstruction Robustness Investigations of Neural Networks-based Methods for MRI**
Christian Wald (TU Berlin)

09:45 – 10:00 **Martingale Theory**
Simon Hackl (RICAM)



universität
wien

10:00 – 10:30

~ Coffee Break ~

10:30 – 12:00

Sub-projects Collaborative Discussions

Session: “Quantitative Medical Elastography and Diagnostics Tissue Optics”

Participant groups: *SP3, SP4 and SP7*

Short Talk: Recent Directions in the Sub-Project on Quantitative Optical Coherence Elastography

Ekaterina Sherina (University of Vienna)

Short Talk: Approximating the Gaussian Beam Model for Quantitative OCT

Leopold Veselka (University of Vienna)

Short Talk: Update on OCT and PAT Elastography

Lisa Krainz (Medical University of Vienna)