

SFB F68 - Tomography Across the Scales

Fourteenth Internal Meeting

Hotel Bergkristall, 03.07.2023 – 05.07.2023

Programme

Monday, 3 July 2023

15:00 – 16:00

~ Opening Lunch ~

Session: “Extragalactic Archaeology”
Chair: *Otmar Scherzer (University of Vienna)*

16:00 – 16:20

Modelling and Describing Near-Gaussian Distributions
Prashin Jethwa (University of Vienna)

16:20 – 16:40

Advantages of Non-Parametric Stellar Kinematics for Orbital Modelling
Stefanie Reiter (University of Vienna)

16:40 – 17:00

A Total-Variation-based Approach to Scale-Space Uncertainty Quantification
Fabian Parzer (University of Vienna)

17:00 – 18:00

Sub-project Collaborative Discussions
Session: “Extragalactic Archaeology”
Participant groups: *SP5, SP7 and SP11*

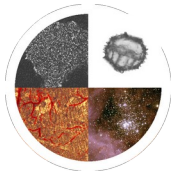
18:00 – 19:30

~ Dinner ~

19:30 – 20:00

PI Meeting (PIs, Coordinator, and Speakers of the SFB members only)





Tuesday, 4 July 2023

Session: **“Quantitative Medical Elastography and Diagnostics Tissue Optics”**
Chair: **Peter Elbau (University of Vienna)**

09:00 – 09:30 **Recent Directions in Quantitative Optical Coherence and Photoacoustic Elastography**
Lisa Krainz (Medical University of Vienna) & Ekaterina Sherina (University of Vienna)

09:30 – 09:45 **Possible Perspectives in Quantitative Optical Coherence Tomography**
Leopold Veselka (University of Vienna)

09:45 – 10:00 **Attenuation Model for Photoacoustic Tomography with Pressure and Shear Waves**
Cong Shi (University of Vienna)

10:00 – 10:30 ~ Coffee Break ~

10:30 – 11:30 **Sub-project Collaborative Discussions**
Session: **“Quantitative Medical Elastography & OCT”**
Participant groups: **SP3, SP4 and SP7**

11:30 – 12:00 *Member Meeting (SFB members only)*

12:00 – 13:30 ~ Lunch ~

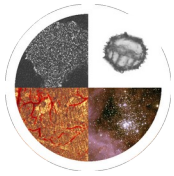
13:30 – 16:00 **Excursion: Hopfgartenrunde or Open Collaboration Time**

Session: **“Imaging of Trapped Particles”**
Chair: **Monika Ritsch-Marte (Medical University of Innsbruck)**

16:00 – 16:20 **Motion Detection from 2D Projections of Moving Particles**
Michael Quellmalz (TU Berlin)

16:20 – 16:40 **Modeling Cluster and Molecule Movement**
Christian Wald (TU Berlin)





16:40 – 17:00

Measuring Phase: from Optical to Acoustic Trapping

Franziska Strasser (Medical University of Innsbruck)

Session: “Adaptive Optics”

Chair: Kemal Raik (University of Vienna)

17:00 – 17:15

Updates on AO-OCT for Retinal Imaging

Elisabeth Brunner (Medical University of Innsbruck)

17:15 – 17:30

Phase Unwrapping with Digital Wavefront Sensors

Simon Hubmer (RICAM)

17:30 – 17:45

Combining the TIE and the TPE for Phase Retrieval

Jikai Yan (University of Vienna)

17:45 – 18:00

Ultrasound Focusing in Layered Media using a Geometrical Acoustics Approach

Simon Hackl (RICAM)

18:00 – 19:30

~ Dinner ~

19:30 – 20:30

Parallel Discussions

Session: “Adaptive Optics”

Participant groups: *SP3, SP5 and SP11*

Session: “Imaging of Trapped Particles”

Participant groups: *SP4, SP6, SP7 and SP10*

Wednesday, 5 July 2023

Session: “Ultra-high Resolution Microscopy”

Chair: Gerhard Schütz (TU Wien)

09:00 – 09:20

Localization of Fixed Dipole Emitters with CryoSMLM

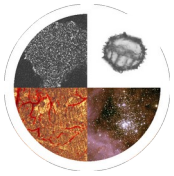
Montserrat López Martínez (TU Wien)

09:20 – 09:40

Biplane Imaging for Orientation Estimation in SMLM

Fabian Hinterer (JKU Linz)





09:40 – 10:00

Inverse Scattering Problem with Internal Sources

Yakun Dong (University of Vienna)

10:00 – 10:30

~ Coffee Break ~

10:30 – 12:00

Sub-project Collaborative Discussions

Session: “**Superresolution Microscopy**”

Participant groups: **SP5, SP7, SP9 and SP10**

12:00 – 13:30

~ Lunch ~