

Program

December 16th – 18th

18:00 *Registration and Get Together*

19:00 *Welcome Reception (FRIAS)*

17th - Day 1:

09:00 *Registration*

09:30 *Welcome, Michael Herbst*

09:45 – 11:45 Plenary Session

09:45 *Impact of Motion on Data Consistency and Image Quality, Oliver Speck (40+5 min)*

10:30 *Short Coffee Break*

11:00 *Retrospective Motion Correction, David Atkinson (25+5 min)*

11:30 *Prospective Motion Correction, Julian Maclaren (25+5 min)*

12:00 *Lunch (Paradies)*

13:30 – 14:00 Poster Sneak Peek (3+2 min, short presentation)

- *Correcting gradient-delay-induced phase errors for prospective motion correction in MRI, Rebecca Sostheim*
- *Dual number Quaternions as a mathematical tool to describe rigid body transformations, Benjamin Zahneisen*
- *Development of Needle Guidance using an Optical Tracking System on the Skyra 3.0 T wide-bore system, Frank Godenschweger*
- *An embedded single tracking camera which calculates 6DoF within the MRI, Thomas Siegert*
- *Knee MRI with in situ mechanical loading using prospective motion correction, Thomas Lange*
- *Highest resolution human in vivo brain MR imaging at 7T using prospective motion correction, Peter Schulze*

14:00 *Coffee Break and Poster Exhibition*

15:00 – 17:00 Pattern Recognition, Optical Tracking, and Real-Time Approaches (15+5 min)

- *MR-Navigator tracking, Andre van der Kouwe*
- *FID Navigators, Tobias Kober*
- *Marker based tracking systems, Jessica Schulz*
- *Encoded marker tracking, Maxim Zaitsev*
- *Field probes, Klaas Prüssmann*
- *Natural feature tracking, Thomas Brox*

17:30 *Optional: Christmas Market*

19:00 *Dinner (Vorderhaus)*

18th Day 2:

9:00 – 10:00 Clinical Perspectives (15+5 min)

- What Does a Body Radiologist Expect from Motion Correction? Tobias Baumann
- What Does a Neuroradiologist Expect from Motion Correction? Karl Egger
- Motion Correction for Cardiac Imaging, Sebastian Kozerke

10:00 *Short Coffee Break*

10:30 – 12: 00 Sequence Developments, Clinical Applications (15+5 min)

- Using volumetric navigators (vNavs) in multi-echo MPRAGE for prospective motion and resonance frequency correction: development progress and lessons learned in routine clinical use, Dylan Tisdall
- Quantitative evaluation of prospective motion correction for various marker fixations, Nicolas Pannier
- Motion correction in MRI with multi-channel FID navigators, Maryna Babayeva
- A Frobenius norm based motion detection method, Guobin Li
- Preservation of Magnetization Coherence Conditions for Multi RF Pulse Sequences during Motion Correction: Translational Motion, Matthias Weigel
- Prospective motion correction of 3D EPI data for functional MRI using optical tracking, Nick Todd

12:00 *Lunch (FRIAS)*

13:00 – 15:00 Alternative Tracking Systems, Motion Gating/Rejection (15+5 min)

- Real-Time Ultrasound Imaging for MR Motion Correction, Sven Rothlübbers
- Correction of micro-motion artifacts in simultaneous EEG-fMRI, Pierre Levan
- Extremely Highly accelerated fat images for motion-navigation at high spatial resolution, Dan Gallichan
- Gradient tones and NMR field probes for prospective motion correction and concurrent field monitoring, Maximilian Häberlin
- Exploiting intrinsic high-frequency information of EPI readouts for prospective motion correction with NMR field probes, Alexander Aranovitch
- The ShapeTape: a novel approach for respiratory gating, Bernd Jung

14:30 *Coffee Break and Discussion*

15:30 – 16:30 Round Table Discussion

From Bench to Bedside, What needs to be done next?

16:30 *Closing Remarks, Michael Herbst*