

Advanced Medical Physics for Image-Guided Cancer Therapy Annual Retreat 2022



May 16-18, 2022
Outdoorhotel Jäger von Fall, Lenggries-Fall

Day 1: Monday, May 16, 2022

08:45 – 10:00 Transfer from Munich to Lenggries-Fall

08:45 Departure from bus stop S-Bahn station Donnersberger Brücke
09:00 Departure from bus stop at P+R Fürstenried West

10:00 – 10:30 Arrival at Lenggries/Fall, Coffee

10:30 – 10:45 Welcome

Katia Parodi (LMU), Franz Pfeiffer (TUM)

10:45 – 11:45 Session I

Chair: Katia Parodi

10:45 Axel Haase (MIBE Munich Institute of Biomedical Engineering): Patents in the Area of Magnetic Resonance Imaging: A multibillion success for academic research

11:45 Mikhail Rumiantcev (C5): Studies of micro- and nanodosimetry in radionuclide therapy using Monte Carlo simulations

Maxin Chen (A1): New avenue from engineering with commercial (CB)CT to pre-clinical research with photon counting detector.

Guyue Hu (B4): Small-animal proton CT and photon counting CT

12.15 – 13:30 Lunch

13:30 – 15:00 Session II

Chair: Ronald Sroka

13:30 Marco Riboldi (LMU): 2D-3D deformable image registration based on in-room proton radiographies

14:30 Andreas Mittermeier (B7): Robust Evaluation of Contrast-Enhanced Imaging for Perfusion Quantification



15:00 – 16:00 Coffee break and room allocation

16:00 – 18:00 Session III

Chair: Franz Pfeiffer

16:00 Martin Fiebich (Technische Hochschule Mittelhessen, Vice-president DGMP): Becoming a Medical Physics Expert

17:00 Dimos Baltas (Universitätsklinikum Freiburg, President DGMP): Medical Physics – Clinical Medical Physicist: Status of Profession, Continuous Education and the Role of DGMP

18:00 - 19:30 Dinner

Day 2: Tuesday, May 17, 2022

09:00 – 11:00 Session IV

Chair: Franz Pfeiffer

09:00 Phil Steininger (MedPhoton GmbH): IRm – overview of the research platform for mobile robotic Imaging

10:00 Elia Lombardo (C4): Offline and online LSTM networks for respiratory motion prediction in MR-guided radiotherapy

10:30 – 11:00 coffee break

11:00 – 12:00 Session V

Chair: Katia Parodi

11:00 Franz Pfeiffer (TUM): From 2D to 3D: Translating Human Darkfield Imaging from Radiography to Tomography

12:00 – 13:00 Lunch

13:00 – 16:30 Social event (rope garden/archery)

16:45 – 17:00 coffee break

17:00 – 18:00 Session VI

Chair: Daniela Pfeiffer

17:00 York HÄMISCH (Direct Conversion GmbH): Industrialized photon counting technology for the next generation of (clinical) x-ray imaging

18:00 - 19:30 Dinner



Day 3: Wednesday, May 18, 2022

09:00 – 11:00 **Session VII**

Chair: Franz Pfeiffer

09:30 Tobias Lasser (TUM): Algorithms for biological and medical imaging

09:00 Max Aumiller (C6): Investigations on interstitial photodynamic therapy of malignant gliomas

10:30 – 11:00 **coffee break**

11:00 – 12:00 **Session VIII**

Chair: Katia Parodi

11:00 Mark Ladd (DKFZ Deutsches Krebsforschungszentrum in der Helmholtz-Gemeinschaft, Vice-president DGMP): MRI at high magnetic fields – what has been achieved and what remains to be done

12:00 – 13:30 **Lunch**

13:30 – 14:30 **GRK meeting (PI, Co-PI)**

GRK student affairs (election of junior speaker ...)

14:30 – 15:15 **closing session**

Chair: Katia Parodi

15:15 – 15:45 **coffee break**

15:45 **Departure**