



## Ph.D. Biophysics day

April 16-17, 2026

Theorie Seminarraum SB3 3.170a

Presentations: 10 min + 5 min discussion

### Agenda – Thursday, April 16

**12:00 Group Photo (meet in the external area between our building and mensa)**

13:00

*Welcome*

13:10

**Vivian Augusta Sarpey:** Generation and utilization of a model cell system to study DSB repair pathway choice at different radiation qualities by live cell microscopy

13:25

**Leon Kaysan:** Modelling radiation-induced neurotoxicity in human cerebral organoids

13:40

**Leonie Hartig:** Human hippocampal organoids as a model to better understand negative effects of space environment on the brain

13:55

**Malte Benje:** The CANTO Project: Effects of Radiation on Circulating Cancer Cells and Metastasis Formation

14:10 *Coffee break*

14:30

**Amelia Jansen van Vuuren:** The gut MICROBiome as a Biomarker for space radiation risk (MICROBIAN)

14:45

**Kai Wen:** Hi-FLASH: Modelling of Rat Glioblastoma and In Vitro Response of F98 Cells to Heavy-Ion Radiotherapy

15:00

**Gaia Volpi:** Radiation effect on murine sarcoma cells and tumor with focus on hypoxic conditions and complement activation

15:15

**Niccoló Edgar Saccone:** Local immunomodulatory effects of irradiation and complement system in a sarcoma mouse model: from cell death to immune infiltration

15:30 *Coffee break*

15:45

**Peter Dick:** Systemic effects of ionizing irradiation and involvement of the complement system in a sarcoma mouse model

16:00

**Dennis Fabian Hintze:** Can radiation overcome tumor heterogeneity?

16:15

**Warisara Charuchinda:** Practical Dosimetry Framework of Synchrotron-Based Proton and Carbon FLASH Beams: Dose Rate Definition, Detector Selection, and Uncertainty Mitigation

16:30

**Hong Ha Nguyen:** Physics and Technical Experiment for FLASH irradiation with Carbon ions

16:45

**Andreas Bückner:** Passive ion beam modulation effects and their applications in pre-clinical studies

17:00 *Adjourn*

## Agenda – Friday, April 17

9:30

Welcome

09:35

**Guansheng Li:** Motion mitigation in upright position: Preliminary study on inter-fractional variations in upright particle therapy

9:50

**Zixin He:** Upright Carbon-Ion Arc Radiotherapy

10:05

**Maximilian Leon Dick:** Real time mixed helium-carbon imaging and range prediction

10:20

**Mariem Ghazouani:** In-beam PET-CT for carbon ion range verification at a SARRP machine

10:35 *Coffee break*

10:55

**Giuseppe Bevilacqua:** Biological impact of spatial and temporal DSB interaction - a model study

11:10

**Christian Deglow:** Tumor dose conversion between RBE prediction systems

11:25

**Luca Lunati:** Design and Optimization of the High-Energy Galactic Cosmic Ray Simulator at FAIR up to 10 GeV/n

11:40

**Virginia Boretti:** RBE Assessment of Galactic Cosmic Rays in Space and Accelerator-Based Simulations

12:00 *End of the Ph.D. day*