

**Symposium: Future Perspectives of Biophysics Research at GSI/FAIR
May 30-31, 2016, GSI Darmstadt / Main Auditorium**

Monday, May 30:

- 14:00 **Welcome Address:** Karlheinz Langanke
- 14:15 **Introduction/Overview:** Michael Scholz / Corinna Kausch
- 14:45 **Radiation Biology I** Chair: Gisela Taucher-Scholz
- 14:45 Burkhard Jakob (GSI Darmstadt) DNA Repair in the Context of Chromatin Organization
- 15:05 Sylvain Costes (LBNL Berkeley) DNA damage quantification / Biological track structure imaging
- 15:25 George Iliakis (Univ. Essen) Mechanisms of DNA double strand break repair
- 15:45 Discussion
- 16:15 **Coffee Break**
- 16:45 **Radiation Biology II** Chair: Sylvia Ritter
- 16:45 Claudia Fournier (GSI Darmstadt) Cancer and non-cancer effects in stem cells and tissues
- 17:05 Wolfgang Dörr (Med. Univ. Vienna) Translational research: normal tissue in ion beam tumor therapy
- 17:25 H. Lehmann (Mayo Clinic Rochester) Translational research: treatment of cardiac arrhythmia
- 17:45 Discussion
- 18:15 **Adjourn**

Tuesday, May 31:

- 9:00 **Medical Physics I** Chair: Uli Weber
- 9:00 Michael Krämer (GSI Darmstadt) Treatment planning, modelling and validation
- 9:20 Katia Parodi (LMU München) Novel imaging for ion beam therapy
- 9:40 Harald Paganetti (MGH Boston) Biological treatment optimization for particle radiation therapy
- 10:00 Discussion
- 10:30 **Coffee Break**
- 11:00 **Medical Physics II** Chair: Michael Krämer
- 11:00 Christian Graeff (GSI Darmstadt) 4D ion beam therapy
- 11:20 Christoph Bert (Univ. Erlangen) Motion mitigation
- 11:40 Sandro Rossi (CNAO Pavia) CNAO status and research perspective
- 12:00 Oliver Jäkel (DKFZ Heidelberg) Potential of novel beam delivery techniques
- 12:20 Discussion
- 13:00 **Lunch**
- 14:00 **Space Research** Chair: Christian Graeff
- 14:00 Uli Weber (GSI Darmstadt) Space Radiation Research
- 14:20 Laure Sabatier (CEA, Font.-a.-Roses) Low dose effects
- 14:40 Lembit Sihver (TU Wien) Radiation Risks in Space - Mitigation and Protection
- 15:00 Discussion
- 15:30 **Final Discussion** Chair: Michael Scholz
- 16:00 **End of Symposium**