

# Program

**Monday, 07 June 2010**

11:00 – 14:00 Registration at the Physikzentrum reception lounge

12:30 LUNCH

**Chair: B. Schutz – Theme: Introduction to black holes**

14:00 – 14:05 Sci. Organizers **Welcome and introduction**

14:05 – 14:20 E. Dreisigacker **About the Wilhelm and Else Heraeus Foundation**

14:20 – 15:20 R. Kerr **Black Holes and the Kerr solution  
(Review)**

15:20 Conference photo (in the front of the Physikzentrum)

15:30 – 16:00 COFFEE BREAK

16:00 – 17:00 A. King **Stellar-mass black holes in astronomy  
(Review)**

17:00 – 18:00 B. Peterson **Supermassive black holes in astronomy  
(Review)**

18:30 DINNER

# Program

**Tuesday, 08 June 2010**

08:00 BREAKFAST

**Chair: D. Xu – Theme: Up close to black holes (BHs)**

09:00 – 09:40 W. Duschl **Physics of accretion disks around BHs and accretion driven growth of supermassive BHs (Review)**

09:40– 10:00 A. Marconi **Weighing BHs from zero to high redshift**

10:00 – 10:20 N. Schartel **XMM-Newton and Chandra X-ray observations of BHs**

10:20 – 10:50 COFFEE BREAK

10:50 – 11:10 G. Pedalletti **A high/very-high energy view on the vicinity of supermassive BHs**

11:10 – 11:30 L. Gallo **Narrow-Line Seyfert 1s: The environments of young active galaxies**

11:30 – 11:50 E. Sani **Enhanced star formation in Narrow-Line Seyfert 1 galaxies revealed by Spitzer**

12:30 LUNCH

# Program

**Tuesday, 08 June 2010**

**Chair: L. Mayer**

- 14:00 – 14:20 M. Krause **Jet environment interaction as a probe of the physics on the scale of a few gravitational radii**
- 14:20 – 15:00 L. Rezzolla **Binary black hole coalescences in numerical relativity (Review)**
- 15:00 – 15:20 J. van Meter **Recent results from numerical simulations of merging black holes**
- 15:20 – 15:50 COFFEE BREAK and poster viewing
- 15:50 – 16:30 K. Danzmann **Ground-based gravitational wave detection (Review)**
- 16:30 – 16:50 A. Sesana **Prospects for gravitational wave detection with pulsar timing arrays**
- 16:50 – 18:00 **Short oral poster presentations + discussion**
- 18:30 DINNER

# Program

Wednesday, 09 June 2010

08:00 BREAKFAST

**Chair: K. Danzmann – Theme: Evolution of supermassive black holes**

09:00 – 09:40 K. Jahnke **Scaling relations of galaxies and black holes: Co-evolution and origin (Review)**

09:40– 10:00 N. Nesvadba **Quantifying the impact of AGN feedback at high redshift**

10:00 – 10:20 F. Shankar **Constraints on BH evolution from AGN duty cycles and clustering properties, and connection to the size and mass evolution of their host galaxies**

10:20 – 10:50 COFFEE BREAK

10:50 – 11:30 B. Sathyaprakash **Gravitational waves and their detection (Review)**

11:30 – 12:10 L. Mayer **Formation, pairing and coalescence of SMBHs in gas-rich galaxy mergers (Review)**

12:30 LUNCH

from 14:00 **Excursion (leisurely hike in the vicinity)**

18:30 DINNER (at the Physikzentrum)

19:30 – 21:00 G. Hasinger **Special evening lecture: Black holes and the fate of the universe**

# Program

Thursday, 10 June 2010

08:00 BREAKFAST

**Chair: B. Sathyaprakash – Theme: Multimessenger studies of black holes**

09:00 – 09:20 M. Krumpe **Which type of galaxy hosts actively accreting super-massive black holes?**

09:20– 10:00 P. Amaro Seoane **A problem of many orders of magnitude: Getting compact objects to merge (Review)**

10:00 – 10:40 B. Schutz **Expectations of LISA studies of black holes, including measuring cosmological parameters (Review)**

10:40 – 11:10 COFFEE BREAK

11:10 – 11:50 S. Komossa **Observations of BH mergers and recoils, and astrophysical implications (Review)**

12:30 LUNCH

# Program

Thursday, 10 June 2010

## **Chair: B. Peterson**

- 14:00 – 14:20 F. Civano **A runaway BH in the COSMOS field**
- 14:20 – 14:40 A. Lobanov **Mergers and nuclear activity in X-shaped radio sources**
- 14:40 – 15:20 F. Liu **The electromagnetic counterparts to massive binary black holes in galactic nuclei (Review)**
- 15:20 – 15:40 D. Xu **An extreme AGN with double-peaked emission-lines: binary black hole and alternatives**
- 15:40 – 16:10 COFFEE BREAK and poster viewing

## **Chair: N. Schartel**

- 16:10 – 16:30 J. Cuadra **BH binary mergers within gas disks**
- 16:30 – 16:50 M. Dotti **Massive BH binaries in the remnants of gas-rich galaxy mergers**
- 16:50 – 17:30 R. Spurzem **Gas-poor galaxy mergers and subsequent black hole mergers (Review)**
- 17:30 – 17:50 Y. Meiron **The stellar kinematic signature of massive binary BHs**
- 17:50 – 18:15 **Poster session + discussion**
- 18:30 CONFERENCE DINNER

Followed by a social evening at the invitation of the Wilhelm und Else Heraeus-Stiftung at the Physikzentrum

# Program

**Friday, 11 June 2010**

08:00 BREAKFAST

***Chair: N. Nesvadba – Theme: Multimessenger studies of BHs and the future***

09:00 – 09:40 C. Miller **Formation of stellar-mass black hole binaries**

09:40– 10:00 N. Neumayer **Nuclear star clusters - clues to BH formation**

10:00 – 10:20 E. Moreno-Mendez **Kerr black holes in binaries and Gamma Ray Bursts**

10:20 – 10:50 COFFEE BREAK

10:50 – 11:30 P. Predehl **eROSITA - a new X-ray all-sky survey (Review)**

12:00 LUNCH

**End of the seminar and departure**