

**Program for**  
**The dance of stars**  
**Dense stellar systems from infant to old**

**MODEST 14**

**June 2-6, 2014**  
**Physikzentrum Bad Honnef**

Note:

- Each talk lasts for 20 minutes (begin/end times indicated in parentheses) followed by 10 minutes discussions
- The names inside square brackets indicate the corresponding session chairs
- Dinner will take place each day 18:30 onwards followed by beer in the cellar of the Physikzentrum
- On Wednesday, we shall have a special dinner (the "Heraeus Abend") in the cellar

# Schedule for “The dance of stars: dense stellar systems from infant to old [MODEST 14]”

**Monday, June 2**

**Welcome and introductory remarks** (09:00 - 09:30) [Kroupa, Banerjee]

birth of a star cluster: star-forming/starburst regions and young clusters  
[de Grijs]

**Alison Sills** (09:30 - 09:50)

*The early evolution of stellar subclusters*

**Tea/coffee break** (10:00 - 10:45)

**Wolfgang Brandner** (10:45 - 11:05)

*Young Massive Star Clusters in the Milky Way*

**Sambaran Banerjee** (11:15 - 11:35)

*The formation of the NGC 3603 starburst cluster: monolithic starburst or hierarchical assembly?*

**Susanne Pfalzner** (11:45 - 12:05)

*What clusters do we see in the age range 3-10 Myr in the solar neighborhood?*

**Lunch break** (12:15 - 13:45)

multiple stellar populations in globular clusters [Ferraro]

**Enrico Vesperini** (13:45 - 14:05)

*Dynamical Evolution of Multiple Stellar Populations in Globular Clusters*

**Javier Alonso-Garcia** (14:15 - 14:35)

*Multiple stellar populations in Galactic globular clusters displayed by the Strömgren system*

**Giacomo Beccari** (14:45 - 15:05)

*Multiple stellar populations in massive star-burst clusters*

**Poster presentations** (15:15 - 16:00) [Pfalzner]

**Tea/coffee break** (16:00 - 16:30)

numerical methods of star-cluster simulations and associated hardware  
[Giersz]

**Fred Rasio** (16:30 - 16:50)

*Globular Cluster Evolution with Monte Carlo and N-body Methods*

**Long Wang** (17:00 - 17:20)

*Acceleration of Nbody6++ and large N-body simulation of globular clusters*

## Tuesday, June 3

### star clusters: structure and dynamical evolution [Pfalzner]

**Douglas Heggie** (09:00 - 09:20)

*The escape rate in isolated systems*

**Richard de Grijs** (09:30 - 09:50)

*Rapid dynamical processes in the cores of young star clusters in the Large Magellanic Cloud*

**Helen Kirk** (10:00 - 10:20)

*Mass Segregation in Small Clusters*

**Tea/coffee break** (10:30 - 11:15)

### influence of external field on cluster evolution [Heggie]

**Andreas Küpper** (11:15 - 11:35)

*The Influence of Eccentric Orbits on Cluster Evolution*

**Akram Hasani Zonoozi** (11:45 - 12:05)

*Direct N-body modeling of the young outer halo globular cluster Palomar 4: the eccentric orbit approach*

**Florent Renaud** (12:15 - 12:35)

*Simulations of star clusters in evolving galaxies: from infant to old*

**Lunch break** (12:45 - 14:15)

### nuclear star clusters [Aharon, Alonso-Garcia]

**Roberto Capuzzo Dolcetta** (14:15 - 14:35)

*Globular Cluster-Massive Black Hole Interaction in Galactic Centers*

**Pau Amaro Seoane** (14:45 - 15:05)

*Sculpting the Galactic Center*

**Tea/coffee break** (15:15 - 16:00)

**Eugene Vasiliev** (16:00 - 16:20)

*A new Monte-Carlo method for dynamical evolution of non-spherical stellar systems*

**Ladislav Subr** (16:30 - 16:50)

*Two body relaxation of stellar disc around an SMBH*

### star clusters: chemical enrichment

**Melvyn Davies** (17:00 - 17:20)

*Supernova enrichment and dynamical histories of solar-type stars in clusters*

## Wednesday, June 4

### blue stragglers in globular clusters [Sills]

**Francesco Ferraro** (09:00 - 09:20)

*Blue Straggler Stars in globular clusters as dynamical probes*

**Arkadiusz Hypki** (09:30 - 09:50)

*Properties of blue straggler populations in evolving star clusters based on the MOCCA dynamical simulations*

**Mirko Simunovic** (10:00 - 10:20)

*The Triple Blue Straggler Star Sequence in NGC 1261: A New Laboratory for Stellar Collision and Blue Straggler Formation Models*

**Tea/coffee break** (10:30 - 11:15)

### birth of a star cluster: star-forming/starburst regions and young clusters

[De Silva]

**Genevieve Parmentier** (11:15 - 11:35)

*Local-Density Driven Clustered Star Formation: Model and Implications*

**Soren Larsen** (11:45 - 12:05)

*The YMC - Globular Cluster link*

**Carsten Weidner** (12:15 - 12:35)

*Isolated versus clustered formation of massive stars*

**Lunch break** (12:45 - 14:15)

### multiple stellar populations in globular clusters: kinematic signatures

[Vesperini]

**Alessandra Mastrobuono Battisti** (14:15 - 14:35)

*Evolution of second generation stars in stellar disks of globular and nuclear clusters*

**Maureen van den Berg** (14:45 - 15:05)

*Interacting binary populations in old open and globular clusters as seen by Chandra*

**Tea/coffee break** (15:15 - 16:00)

### star clusters: ongoing surveys [Rasio]

**Eva K. Grebel** (16:00 - 16:20)

*The Star Clusters of the Magellanic Clouds*

**Gayandhi De Silva** (16:30 - 16:50)

*The GALAH survey*

**Joachim Vanderbeke** (17:00 - 17:20)

*Galactic Globular Cluster Catalog (G2C2) and its applications*

**Andrea Dieball** (17:30 - 17:50)

*Hunting Brown Dwarfs in Globular Clusters*

## Thursday, June 5

compact stellar remnants in globular/open clusters [Ivanova, Strader, Davies, Banerjee]

**Jay Strader** (09:00 - 09:20)

*Black holes in Milky Way globular clusters*

**Matthew Benacquista** (09:30 - 09:50)

*Globular Clusters as Sources of Gravitational Waves*

**Tea/coffee break** (10:00 - 10:45)

**Mirek Giersz** (10:45 - 11:05)

*Can black holes be formed in dynamic interactions in star clusters?*

**Sverre Aarseth** (11:15 - 11:35)

*Tidal disruptions by stellar mass black holes*

**Christian Knigge** (11:45 - 12:05)

*Cataclysmic Variables in Globular Clusters*

**Lunch break** (12:15 - 13:45)

**Natalia Ivanova** (13:45 - 14:05)

*Formation of low-mass X-ray binaries in globular clusters*

**Barbara Lanzoni** (14:15 - 14:35)

*Searching for IMBHs in Galactic globular clusters*

**Tea/coffee break** (14:45 - 15:30)

**Michela Mapelli** (15:30 - 15:50)

*The impact of three-body encounters on the demographics of X-ray binaries in young star clusters*

**Thomas Tauris** (16:00 - 16:20)

*Formation of a triple millisecond pulsar with two white dwarf companions*

AMUSEment with many-body systems [Grebel]

**Simon Portegies Zwart** (16:30 - 16:50)

*MODEST with AMUSE*

**Nora Lützgendorf** (17:00 - 17:20)

*Testing black-hole accretion from stellar winds in star clusters using AMUSE*

## Friday, June 6

dwarf galaxies/UCDs: origin and kinematics [Hilker, Kroupa, Pawlowski]

**Michael Hilker** (09:00 - 09:20)

*Ultra-compact dwarf galaxies: observational constraints on their origin*

**Holger Baumgardt** (09:30 - 09:50)

*Ultracompact dwarf galaxy formation in cosmological simulations*

**Tea/coffee break** (10:00 - 10:45)

**Sylvia Ploeckinger** (10:45 - 11:05)

*The chemo-dynamical evolution of Tidal Dwarf Galaxies*

**Steffen Mieske** (11:15 - 11:35)

*Massive black holes in UCDs as relics of their progenitors? Clues from internal dynamics*

**Mike Fellhauer** (11:45 - 12:05)

*Life and death of a hero - Modelling Hercules*

**Lunch** (12:15 - 13:45)

**Marcel Pawlowski** (13:45 - 14:05)

*Globular Clusters in relation to the VPOS of the Milky Way*

**Jörg Dabringhausen** (14:15 - 14:35)

*A varying IMF in ultra-compact dwarf galaxies*

**Ricardo Salinas** (14:45 - 15:05)

*The initial mass function of bulge clusters*

**Tea/coffee and poster viewing** (15:15 - 16:30)

**Concluding remarks** (16:30 - 17:00)

**Conclusion with Beer** (17:00 - 18:30)