



European Magnetic Field Laboratory

3rd EuroMagNET Summer School Science in High Magnetic Fields

September 30 – October 7, 2012, Rügen, Germany

Program



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Venue address

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Organization

HLD.



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Scope of the Summer School

High Magnetic Fields are an indispensable tool to access the fundamental properties of matter. In the 20th century they enabled significant scientific breakthroughs witnessed by several Nobel prizes, and, undoubtedly, high magnetic fields will continue to play a decisive role in shaping the European research landscape in the future. Within Europe, high field research is bundled in the EuroMagNET II program, a coordinated approach to access, experimental development and scientific exploitation of all European large infrastructures for high magnetic fields.

The 3rd EuroMagNET Summer School follows the tradition established by the 1st EuroMagNET Summer School 2007 in Corsica and the 2nd Summer School 2010 in Ameland. It will be held from 30 September - 7 October 2012 on the North German island Rügen.

The school is dedicated to recent advances in Science in High Magnetic Fields. Outstanding scientists will give tutorial lectures on different areas such as semiconductor physics, low-dimensional materials and nano-scaled objects, strongly correlated electron systems, magnetism, superconductivity, molecular systems, high-magnetic-field technology and new high-field experimental techniques.

50 participants have been selected among young scientists based on their motivation, curriculum vitae and abstract submission. They will have the possibility to present their own work as an oral contribution. EuroMagNET II will provide substantial financial support for travel and subsistence.



This Summer School is supported by EuroMagNET II under the EU Contract No. 228043.

Program

Sunday, September 30, 2012

17:00 – 18:30 Registration

19:00 – 21:00 Dinner

Monday, October 1, 2012

07:30 – 08:45 Breakfast

08:45 – 09:00 Opening

09:00 – 10:30 *Prize winner ceremony: Jochen Wosnitza*
Lecture: Prize winner Benno Meyer

10:30 – 11:00 Coffee break

11:00 – 12:30 *Lecture: Antony Carrington,*
The electronic structure of iron-pnictide superconductors

12:30 – 14:30 Lunch

14:30 – 16:00 *Lecture: Thomas Herrmannsdörfer,*
Measurement techniques for the characterization of
magnetic properties

16:00 – 16:30 Coffee break

16:30 – 17:30 *Talks: Mirko Bacani, Vladimir Krishtop, Steven Reichardt,*
Francesca Chiappini, Rico Beyer

17:30 – 17:45 Break

17:45 – 18:33 *Talks: Dmytro Kamenskyi, Andreas Jost, Franciscarlos*
Gomes da Silva, Alexandra Palacio Morales

19:00 – 21:00 Dinner

Tuesday, October 2, 2012

07:30 – 09:00 Breakfast

09:00 – 10:30 *Lecture: Christoph Strunk,
Thermodynamics and the Quantum Transport of Particles
and Heat*

10:30 – 11:00 Coffee break

11:00 – 12:30 *Lecture: Eric Beaugnon,
Magneto-science: high magnetic field effects on materials
processing at high temperature*

12:30 – 14:30 Lunch

14:30 – 16:00 *Lecture: Francois Debray,
DC High magnetic field development*

16:00 – 16:30 Coffee break

16:30 – 17:30 *Talks: Samuel F. Blake, Alexander Kuntsevich,
S. Shanmukharao Samatham, Geoffrey Chanda, Papori
Gogoi*

17:30 – 17:45 Break

17:45 – 18:33 *Talks: Masoumeh Keshavarz, Andrey Polyakov,
František Horváth, Sergio Pezzini*

19:00 – 21:00 *BBQ Dinner*

Wednesday, October 3, 2012

- 07:30 – 09:00 Breakfast
- 09:00 – 10:30 *Lecture: James Brooks,
The Spinels: a Conspiracy of Charge, Spin, Orbit, and Lattice
Parameters*
- 10:30 – 11:00 Coffee break
- 11:00 – 12:30 *Lecture: Bernhard Holzapfel,
Superconducting Materials for Power and Magnet
Applications*
- 12:30 – 14:30 Lunch
- 14:30 – 16:00 *Lecture: Frederic Mila,
Investigating quantum magnets in high magnetic field*
- 16:00 – 16:30 Coffee break
- 16:30 – 17:30 *Talks: Marta De Luca, Maciej Molas, Saeedeh Soleimani,
Granados del Águila, Shadi Shaikh Yasin*
- 17:30 – 17:45 Break
- 17:45 – 18:33 *Talks: Rico Schönemann, Laurens Peters, Fabrice Iacovella,
Arkadiusz Podgórn*
- 19:00 – 21:00 Dinner

Thursday, October 4, 2012

- 07:30 – 09:00 Breakfast
- 09:00 – 10:30 *Lecture: Oliver Portugall,
Beyond 100 Tesla: The technology and scientific application
of Megagauss Fields*

10:30 – 11:00	Coffee break
11:00 – 12:30	<i>Lecture: Karel Prokes, High magnetic fields in neutron science</i>
12:30 – 14:30	Lunch
14:30 – 15:30	free time
15:30 – 19:15	<u>Excursion:</u> Kap Arkona and Fisher village Vitt
<u>19:30</u> – 21:00	Dinner

Friday, October 5, 2012

07:30 – 09:00	Breakfast
09:00 – 10:30	<i>Lecture: Gertrud Zwicknagl, Superconductivity in High Magnetic Fields</i>
10:30 – 11:00	Coffee break
11:00 – 12:30	<i>Lecture: Christoph Brüne, Dirac Fermions in HgTe</i>
12:30 – 14:30	Lunch
14:30 – 16:00	<i>Lecture: Georg Maret, Soft matter in high and low dc magnetic fields</i>
16:00 – 16:30	Coffee break
16:30 – 17:30	<i>Talks: Mato Dian, Naresh Nimma, David Szaller, Mahdiyeh Ghorbani Zavareh, Veerendra Guduru</i>
17:30 – 17:45	Break

17:45 – 18:33 *Talks: Suruchi Singh, Richard Skrotzki, Lukasz Kilanski, Michal Rajňák*

19:00 – 21:00 Dinner

Saturday, October 6, 2012

07:30 – 09:00 Breakfast

09:00 – 10:30 *Lecture: Matthias Vojta*
Spin liquids, non-Fermi liquids, and the cuprate pseudogap

10:30 – 11:00 Coffee break

11:00 – 12:30 *Lecture: James Annett*
Unconventional Superconductivity

12:30 – 14:30 Lunch

14:30 – 16:00 *Lecture: Uli Zeitler*
Quantum transport in oxide heterostructures

16:00 – 16:30 Coffee break

16:30 – 17:30 *Talks: Dianta Ginting, Agnesa Orbanova, Endre Tóvári, Bhawana Jha, Kathrin Götze*

17:30 – 17:45 Break

17:45 – 18:21 *Talks: Peter van Rhee, Steffen Wiedmann, Jonas Kohlrautz*

19:00 – 21:00 Dinner

Sunday, October 7, 2012

09:00 Closing and Departure

Lecturers

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3 rd EuroMAGNET Summer School, Rügen								
	Sunday, 30 September 2012	Monday, 1 October 2012	Tuesday, 2 October 2012	Wednesday, 3 October 2012	Thursday, 4 October 2012	Friday, 5 October 2012	Saturday, 6 October 2012	Sunday, 7 October 2012
07:30 - 08:00		Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast
08:00 - 09:00		Opening						Closing
09:00 - 10:00		Prize winner ceremony: Jochen Wosnitza, Lecture: Benno Meier	Lecture: Christoph Strunk	Lecture: James Brooks	Lecture: Oliver Portugall	Lecture: Gertrud Zwicknagl	Lecture: Matthias Vojta	
10:00 - 11:00		Coffee break	Coffee break	Coffee break	Coffee break	Coffee break	Coffee break	
11:00 - 12:00		Lecture: Antony Carrington	Lecture: Eric Beaugnon	Lecture: Bernhard Holzappel	Lecture: Karel Prokes	Lecture: Christoph Brüne	Lecture: James Annett	
12:00 - 13:00								
13:00 - 14:00		Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	
14:00 - 15:00		Lecture: Thomas Herrmannsdörfer	Lecture: Francois Debray	Lecture: Frederic Mila	Free time	Lecture: Georg Maret	Lecture: Uli Zeitler	
15:00 - 16:00								
16:00 - 17:00		Coffee break	Coffee break	Coffee break	Coffee break	Coffee break	Coffee break	
17:00 - 18:00	Registration	Talks: Bacani, Krishtop, Reichardt, Chiappini, Beyer	Talks: Blake, Kuntsevich, Samatham, Chanda, Gogoi	Talks: De Luca, Molas, Soleimani, Granados del Águila, Shaikh Yasin	Excursion	Talks: Dian, Nimma, Szaller, Ghorbani Zavareh, Jha	Talks: Ginting, Orbanova, Tóvári, Guduru, Götze	Break
18:00 - 19:00		Talks: Kamenskyi, Jost, Gomes da Silva, Palacio Morales	Talks: Keshavarz, Polyakov, Horváth, Pezzini	Talks: Schönemann, Peters, Iacovella, Podgórní		Talks: Singh, Skrotzki, Kilanski, Rajniák	Talks: van Rhee, Wiedmann, Kohlrutz	
19:00 - 20:00	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	
20:00 - 21:00								