3rd International Symposium on

The Dynamics of Magnetic Vortices

29 Nov. – 02 Dec. 2009

Hamburg, Germany

Graduiertenkolleg 1286

Maßgeschneiderte Metall-Halbleiter-Hybridsysteme

Functional Metal-Semiconductor Hybrid Systems

Invited Speakers

Yves Acremann
SSRL, Stanford

Yury Gaididei
Kiev University

Riccardo Hertel
Forschungszentrum Jülich

Sang-Koog Kim
Seoul National University, Korea

Mathias Kläui
University of Konstanz

Valentyn Novosad
Argonne National Lab

Stuart Parkin
IBM Almaden Research Center

Jens Wiebe
University of Hamburg

Research Topics

- Fundamental Understanding of Magnetic Vortices
- Applications of Magnetic Vortices
- Vortices in Domain Walls
- Future of Magnetic Vortex Studies

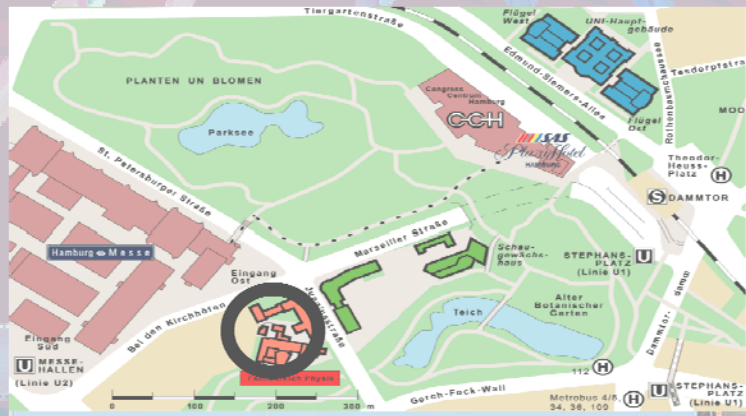
Contact Information

Markus Bolte
mbolte@physik.uni-hamburg.de
Tel: +49 40 42838 7696

Guido Meier
gmeier@physik.uni-hamburg.de
Tel.: +49 40 42838 2903

Bartel Van Waeyenberge
Bartel.VanWaeyenberge@UGent.Be
Tel.: +32 9 264 43 66

Location:



Scientific Aim

Magnetic Vortices appear in magnetic thin films when, in order to minimize the exchange and magnetostatic energy, the magnetization in a small region is forced out-of-plane. Recently, the study of the dynamics of these vortices has attracted much attention as they could be constituents of non-volatile storage devices. Many important experimental, theoretical, and simulational contributions have recently been made to understand the intricate details of the dynamics of magnetic vortices. The aim of this symposium is to bring together world-leading experts to continue the fast progress in this exciting field of research. We thank the Collaborative Research Center (SFB) 668 “Magnetism from Single Atoms to Nanostructures” and the Graduiertenkolleg 1286 for funding.

Purpose of this symposium

- To strengthen the scientific community that focuses its research on the dynamics of magnetic vortices in confined structures, micro- and nanoelements, and nanowires
- Bring together experts in this field that share their latest research results with each other.
- Facilitate the dissemination of knowledge by combining analytical, experimental, and simulational expertise,
- Identify the remaining challenges in the field,
- Help establish vortex dynamics as a research topic within the magnetic community.

Welcome to Hamburg!

Markus Bolte
Guido Meier
Bartel Van Waeyenberge

Program

Sunday, November 29th:

Before 19.00 Arrival at the Hotel ‘Baseler Hof‘
19.30 Welcome Dinner Brauhaus

Monday, November 30th:

9.00 – 9.15 Welcome

Session 1: Fundamentals of Vortex Dynamics I

9.15 – 10.00 Jens Wiebe, *University of Hamburg*
10.00 – 10.30 Coffee Break
10.30 – 11.15 Yury Gaididei, *Bogolyubov Inst. Th. Physics, Kyiv*
11.15 – 12.00 Bartel Van Waeyenberge, *University of Gent*
12.00 – 13.30 Lunch

Session 2: Fundamentals of Vortex Dynamics II

13.30 – 14.15 Sang-Koog Kim, *Seoul National University*
14.15 – 15.00 Markus Bolte, *University of Hamburg*
15.00 – 15.30 Coffee Break
15.30 – 16.15 Riccardo Hertel, *IFF, Research Center Jülich*
16.15 – 17.00 Yves Acremann, *ETH Zürich*
17.00 – 17.20 Michael Martens, *University of Hamburg*
17.20 – 17.40 Sebastian Gliga, *Argonne Nat’l Lab*
19.00 – 21.30 Conference Dinner

Tuesday, December 1st:

Session 3: Vortex Dynamics in Domain Walls

9.00 – 9.45 Stuart Parkin, *IBM Almaden*
9.45 – 10.15 Coffee Break
10.15 – 11.00 Mathias Kläui, *University of Konstanz*
11.00 – 11.45 Lars Bocklage, *University of Hamburg*
12.00 – 13.30 Lunch

Session 4: The Future of Vortex Dynamics

13.30 – 14.10 Benjamin Krüger, Andreas Vogel, *University of Hamburg*
14.10 – 15.00 Round Table Discussion
15.15 – 17.00 Sight Seeing Tour of Hamburg
17.00 – 18.00 Dinner (on your own)
18.30 – 20.30 ‘Lion King‘ Musical

Wednesday, December 2nd:

Session 5: Applications for Magnetic Vortices

9.00 – 9.45 Valentyn Novosad, *Argonne Nat’l Lab*
9.45 – 10.20 Coffee Break
10.20 – 11.20 André Drews, Stellan Bohlens, Massoud Najafi, *University of Hamburg*
11.20 – 11.50 Summary and Farewell
12.00 – 13.30 Lunch