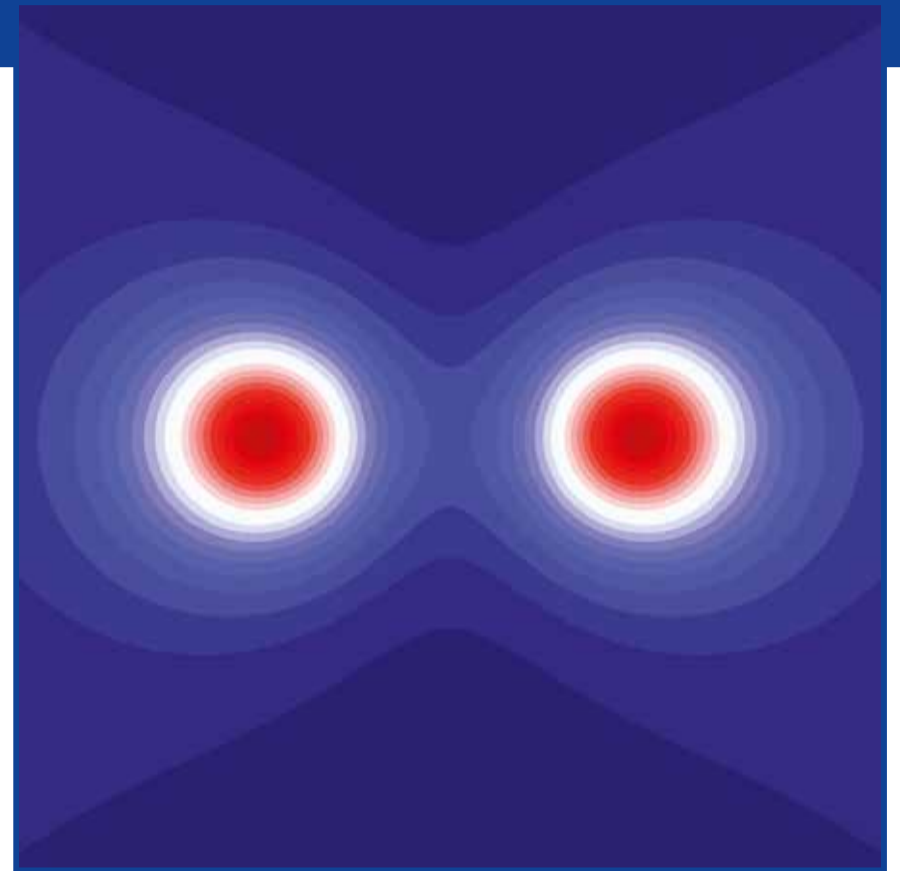




Topological Patterns and Dynamics in Magnetic Elements and in Condensed Matter

International Seminar and Workshop 27 June - 8 July 2016

The aim of the meeting is to bring together specialists from physics and mathematics working on micromagnetics and condensed matter systems and to foster interaction between these areas. The focus will be on statics and dynamics of nano- and meso-scopic structures (solitons, domain walls and other) and patterns from a theoretical and numerical point of view with a contribution from experimental studies. Modern mathematical techniques in micromagnetics and condensed matter will be highlighted.



Topics include

- Micromagnetics (mathematical theory and numerics)
- Landau-Lifshitz equation
- Gross-Pitaevskii equation
- Nonlinear dynamics in condensed matter
- Multi-scale patterns (nano- and meso-scale)
- Traveling waves in condensed matter
- Vortices in condensed matter
- Skyrmions in Dzyaloshinskii-Moriya materials and magnetic bubbles
- Magnetic domain walls
- Effective motion laws for topological singularities (vortices, skyrmions, etc)
- Spin-torque dynamics in micromagnetics

Invited speakers

Amandine Aftalion (FR)
 Fabrice Bethuel (FR)
 Hans-Benjamin Braun (IE)
 Gilles Carbou (FR)
 Giovanni Finocchio (IT)
 Markus Garst (DE)
 Philippe Gravejat (FR)
 Stephen Gustafson (CA)
 Thorsten Hesjedal (UK)
 Mark Hoefer (US)
 Robert L. Jerrard (CA)
 Joo-Von Kim (FR)
 Hans Knüpfer (DE)
 Matthias Kurzke (UK)
 Luis López Díaz (ES)
 Mihai Maris (FR)
 Guido Meier (DE)
 Christof Melcher (DE)
 Benoît Merlet (FR)
 Evelyne Miot (FR)

Roger Moser (UK)
 Felix Otto (DE)
 Jonathan Robbins (UK)
 Denis Sheka (UA)
 Valeriy V. Slustikov (UK)
 Oleg Tchernyshyov (US)
 Oleg Tretiakov (US)
 Nicolas Vukadinovic (FR)
 Roland Wiesendanger (DE)

Scientific coordinators

Nicolas Papanicolaou
 (Heraklion, Greece)
 Radu Ignat
 (Toulouse, France)
 Stavros Komineas
 (Heraklion, Greece)

Organisation

Mandy Lochar, MPIPKS

Applications received before 29 February 2016 are considered preferentially.

Applications are welcome and should be made by using the application form on the event's web page. The number of attendees is limited. The registration fee for the international seminar and workshop is 120 Euro and should be paid by all participants. Costs for accommodation and meals will be covered by the Max Planck Institute. Limited funding is available to partially cover travel expenses. Please note that childcare is available upon request.

For further information please contact:

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