

PROGRAM | conference

Spin Dynamics in Nanostructures



Sunday - July 16th, 2017

- 4:00 pm - 8:00 pm Arrival and Check-in
 6:00 pm - 7:00 pm *Dinner*
 7:30 pm - 7:40 pm Welcome / Introductory Comments by GRC Site Staff

Non Collinear Spin Textures

| Joseph Barker (Institute for Materials Research, Tohoku University, Japan)

- 7:40 pm - 7:45 pm Opening Remarks
 7:45 pm - 8:10 pm **Magnetoelectric Effects in Antiferromagnets**
 | Hua Chen (University of Texas at Austin, USA)
 8:10 pm - 8:20 pm Discussion
 8:20 pm - 8:45 pm **Magnonics in Spin Textured Materials**
 | Burkard Hillebrands (University of Kaiserslautern, Germany)
 8:45 pm - 8:55 pm Discussion
 8:55 pm - 9:20 pm **Generating and Manipulating Room-Temperature Skyrmions**
 | Axel Hoffmann (Argonne National Laboratory, USA)
 9:20 pm - 9:30 pm Discussion

Monday - July 17th, 2017

- 7:30 am - 8:30 am *Breakfast*

Charge to Spin Conversion

| Xiaofeng Jin (Fudan University, China)

- 9:00 am - 9:30 am **Spin and Charge Conversion in 2D Quantum Materials**
 | Wei Han (Peking University, China)
 9:30 am - 9:45 am Discussion
 9:45 am - 10:15 am **Spin Orbit Interaction at Terahertz Speeds: Probing and Driving Spins at Highest Frequencies**
 | Tom Seifert (Fritz-Haber-Institute of the Max-Planck-Society, Germany)
 10:15 am - 10:30 am Discussion
 10:30 am - 11:05 am *Coffee Break*
 11:05 am - 11:35 am **Topological Antiferromagnetic Spin-Orbitronics**
 | Jairo Sinova (Johannes Gutenberg University of Mainz, Germany)
 11:35 am - 11:50 am Discussion
 11:50 am - 12:20 pm **Novel Spin Hall Effect in Chiral Antiferromagnets**
 | Yoshichika Otani (Institute for Solid State Physics (ISSP), University of Tokyo, Japan)
 12:20 pm - 12:30 pm Discussion
 12:30 pm *Group Photo / Lunch*
 4:30 pm - 6:00 pm Poster Session

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Topological Matter

| Stuart Parkin (Max Planck Institute of Microstructure Physics, Halle, Germany)

6:00 pm - 6:25 pm	Charge and Spin Transports in Topological Insulators and Weyl Semimetals Hyunsoo Yang (National University of Singapore, Singapore)
6:25 pm - 6:40 pm	Discussion
6:40 pm - 7:05 pm	Topological Physics in HgTe-Based Quantum Devices Laurens Molenkamp (University of Würzburg, Germany)
7:05 pm - 7:20 pm	Discussion
7:20 pm - 7:45 pm	Visualization and Manipulation of Topological Electronic States Yulin Chen (University of Oxford, United Kingdom)
7:45 pm - 8:00 pm	Discussion
8:00 pm	<i>Dinner</i>

Tuesday - July 18th, 2017

7:30 am - 8:30 am *Breakfast*

Spintronic Science and Technology

| Sadamichi Maekawa (Advanced Science Research Center, Japan Atomic Energy Agency, Japan)

9:00 am - 9:30 am	Berry Phases of Berry Phases Andrei Bernevig (Princeton University, USA)
9:30 am - 9:45 am	Discussion
9:45 am - 10:15 am	Topological Materials for Spintronics Claudia Felser (Max Planck Institute for Chemical Physics of Solids, Germany)
10:15 am - 10:30 am	Discussion
10:30 am - 11:00 am	<i>Coffee Break</i>
11:00 am - 11:30 am	Spintronics for Logic Scaling: Magneto-Electric Spin-Orbit Logic Sasikanth Manipatruni (Intel Corporation, USA)
11:30 am - 11:45 am	Discussion
11:45 am - 12:15 pm	Emergent Torques in Various Magnetic Nanostructures See-Hun Yang (IBM Research - Almaden, USA)
12:15 pm - 12:30 pm	Discussion
12:30 pm	<i>Lunch</i>
4:30 pm - 6:00 pm	Poster Session

Magnetization Switching

| Theo Rasing (Radboud University Nijmegen, The Netherlands)

6:00 pm - 6:20 pm	Spin Emission from an Antiferromagnet Chiara Ciccarelli (University of Cambridge, United Kingdom)
6:20 pm - 6:30 pm	Discussion
6:30 pm - 6:50 pm	THz-Driven Spin Dynamics: A New Light on Old Questions Stefano Bonetti (Stockholm University, Sweden)
6:50 pm - 7:00 pm	Discussion

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7:00 pm - 7:20 pm	The Role of Interfaces in Optical Control of Magnetism Aleksei Kimel (Radboud University Nijmegen, The Netherlands)
7:20 pm - 7:30 pm	Discussion
7:30 pm - 7:50 pm	Magnetisation Manipulation with Light and Electrons Femto-Second Pulses Stephane Mangin (University of Lorraine, France)
7:50 pm - 8:00 pm	Discussion
8:00 pm	<i>Dinner</i>

Wednesday - July 19th, 2017

7:30 am - 8:30 am	<i>Breakfast</i>
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Antiferromagnetic Spintronics

| Thomas Jungwirth (Czech Academy of Sciences, Czech Republic)

9:00 am - 9:30 am	Current-Driven Antiferromagnetic Oscillator as a Detector of Terahertz Pulses Olena Gomonyay (Johannes Gutenberg University of Mainz, Germany)
9:30 am - 9:45 am	Discussion
9:45 am - 10:15 am	Skymion Hall Effect in Antiferromagnets and Ferromagnets Oleg Tretiakov (Institute for Materials Research, Tohoku University, Japan)
10:15 am - 10:30 am	Discussion
10:30 am - 11:00 am	<i>Coffee Break</i>
11:00 am - 11:30 am	Spin-Polarized Current in Non-Collinear Antiferromagnets Jakub Zelezny (Czech Academy of Sciences, Czech Republic)
11:30 am - 11:45 am	Discussion
11:45 am - 12:15 pm	Spinon Spin Current Eiji Saitoh (Advanced Institute for Materials Research, Tohoku University, Japan)
12:15 pm - 12:30 pm	Discussion
12:30 pm	<i>Lunch</i>
4:30 pm - 6:00 pm	Poster Session

Magnetic Imaging

| Christian Back (University of Regensburg, Germany)

6:00 pm - 6:30 pm	Magnetic Imaging and Design at the Single Atom Level Alexander Khajetoorians (Radboud University Nijmegen, Netherlands)
6:30 pm - 6:40 pm	Discussion
6:40 pm - 7:10 pm	The Exciting Physics of Bottom-Up Constructed Atomic Chains with Non-Collinear Spin Textures Roland Wiesendanger (University of Hamburg, Germany)
7:10 pm - 7:20 pm	Discussion
7:20 pm - 7:50 pm	Majorana's Spin Signature Ali Yazdani (Princeton University, USA)
7:50 pm - 8:00 pm	Discussion
8:00 pm	<i>Dinner</i>

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Thursday - July 20th, 2017

7:30 am - 8:30 am

Breakfast

8:30 am - 9:00 am

Business Meeting

Nominations and Election for the Next Vice Chair, Conference Evaluation, Discuss Future Site and Scheduling Preferences

Orbitronics

| Vincent Cros (Unité Mixte de Physique CNRS/Thales, France)

9:00 am - 9:30 am

Spin Orbit Effects in Metallic Heterostructures

| Masamitsu Hayashi (University of Tokyo / National Institute for Materials Science, Japan)

9:30 am - 9:45 am

Discussion

9:45 am - 10:15 am

Emergent Orbitronics in Complex Magnets

Yurij Mokrousov (Forschungszentrum Jülich, Germany)

10:15 am - 10:30 am

Discussion

10:30 am - 11:00 am

Coffee Break

11:00 am - 11:30 am

Spin Dynamics in Materials with Dzyaloshinskii-Moriya Interaction

| Teruo Ono (Kyoto University, Japan)

11:30 am - 11:45 am

Discussion

11:45 am - 12:15 pm

2D Group-IV Monochalcogenides: A New Playground for Everyone

| Kai Chang (Max Planck Institute of Microstructure Physics, Germany)

12:15 pm - 12:30 pm

Discussion

12:30 pm

Lunch

4:30 pm - 6:00 pm

Poster Session

Future and Prospects for Devices

| Luke Fleet (Nature Physics, United Kingdom)

6:00 pm - 6:30 pm

Device Prospects for Magnetic Insulators

| Gerrit Bauer (Tohoku University, Japan)

6:30 pm - 6:40 pm

Discussion

6:40 pm - 7:10 pm

Stochastic Spin Networks: Common Denominator to Manufacturing Yield, Hardware Neural Networks and Many Body Physics?

| Behtash Behin-Aein (GlobalFoundries, USA)

7:10 pm - 7:20 pm

Discussion

7:20 pm - 7:50 pm

Spintronics Beyond Magnetoresistance

| Igor Zutic (State University of New York at Buffalo, USA)

7:50 pm - 8:00 pm

Discussion

8:00 pm

Dinner

Friday - July 21st, 2017

7:30 am - 8:30 am

Breakfast

9:00 am

Departure