

## Confirmed Invited Speakers

as of February 9, 2018

### PLENARY SPEAKERS

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**ROBERT BUHRMAN**

Cornell University

**SATORU NAKATSUJI**

The University of Tokyo

**WINNER 2018 IUPAP MAGNETISM**

**AWARD AND NEEL MEDAL**

To be Announced

**TOMÁŠ JUNGWIRTH**

Academy of Sciences of the Czech Republic

**NICOLA SPALDIN**

ETH Zürich

### SYMPOSIA

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#### Computing With Spintronic Devices

**PAUL CROWELL**

University of Minnesota

*"Spin transport in Heusler alloy/III-V semiconductor valves"*

**SHUSUKE FUKAMI**

Tohoku University, RIEC

*"Analog spin-orbit torque devices with antiferromagnets for artificial neural networks"*

**JULIE GROLIER**

Université Paris-Sud

*"Neuromorphic computing with spin-torque nano-oscillators"*

#### Emerging Phenomena in Van der Waals Magnets

**KENNETH BURCH**

Boston College

*"Exploring Topological Phases with Magnetic 2D Atomic Crystals"*

**HYEONSIK CHEONG**

Sogang University

*"Antiferromagnetic ordering in the 2-dimensional limit"*

**DI XIAO**

Carnegie Mellon University

*"Tunable magnetic and magneto-optic properties in 2D magnets"*

#### New Routes and Materials Toward Quantum Criticality

**MEIGAN ARONSON**

Texas A&M University

*"Novel quantum critical phenomena in d- and f-electron systems"*

**IAN FISHER**

Stanford University, Fisher Research Group

*"Quantum criticality in iron pnictides and beyond"*

**KAI GRUBE**

Karlsruhe Institute of Technology, Institute for Solid-State Physics

*"Multidimensional entropy landscape of quantum criticality"*

#### Spin Currents and Magnonic Condensates in Magnetic Insulators

**IGOR BARSUKOV**

University of California, Riverside

*"Condensation of magnons by spin Seebeck currents"*

**BURKARD HILLEBRANDS**

TU Kaiserslautern

*"Supercurrent in a room-temperature Bose-Einstein magnon condensate"*

**SE KWON KIM**

UCLA

*"Magnonic condensates and superfluids"*

### INVITED SPEAKERS

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#### Strongly Correlated Electrons Systems (SCES)

**ANNICA BLACK-SCHAFFER**

Uppsala University

*"Odd-Frequency Superconductivity in Sr<sub>2</sub>RuO<sub>4</sub> Measured by Kerr Rotation"*

**DANIEL BRAITHWAITE**

CEA

*"Dimensionality driven enhancement of ferromagnetic superconductivity in URhGe"*

**ONUR ERTEN**

Arizona State University

*"Skyrme Insulators: Insulators at the Brink of Superconductivity"*

**MEYDI FERRIER**

Laboratoire de Physique des Solides  
*"Quantum noise measurement and universal quantum fluctuations in a Kondo-Correlated Quantum Dot out-of-equilibrium"*

**CHUNYU GUO**

Zhejiang University  
*"Weyl fermions in the heavy-fermion semimetal YbPtBi"*

**LIN JIAO**

Max-Planck-Institute for Chemical Physics of Solids  
*"Evolution of Electronic Non-Fermi-Liquid Excitations In a Canonical Kondo-Lattice System"*

**CATHERINE KALLIN**

McMaster University  
*"Sr<sub>2</sub>RuO<sub>4</sub>: challenges and opportunities"*

**KAZUSHI KANODA**

The University of Tokyo  
*"Strongly correlated topological states in organics"*

**EUN-AH KIM**

Cornell University  
*"Applications of machine learning in understanding topological phases"*

**GEORG KNEBEL**

Inac, Institute for Nanoscience and Cryogenics  
*"Fermi surface instabilities in Kondo lattices: Ce, Yb, and U"*

**HSIN-HUA LAI**

Rice University  
*"Weyl-Kondo Semimetals in Heavy-Fermion Systems"*

**LU LI**

University of Michigan  
*"Quantum Oscillation Measurements on Kondo Insulators SmB<sub>6</sub> and YbB<sub>12</sub>"*

**YUAN LI**

Peking University  
*"Robust Dirac Magnons in a Highly Interconnected 3D Spin Lattice"*

**PHILIPPE MENDELS**

Université Paris-Sud  
*"NMR on Kagome lattices"*

**ZI YANG MENG**

Chinese Academy of Sciences  
*"Continuous quantum phase transition in a local-moment-based metallic ferromagnet"*

**DRAGAN MIHAILOVIC**

Jozef Stefan Institute  
*"Transient optical spectroscopy."*

**FREDERIC MILA**

EPFL  
*"Quantum spin liquids: from theory to experiments and numerical simulations"*

**PHILIP MOLL**

Max Planck Institute for Chemical Physics of Solids  
*"One-dimensional superconductivity in the three-dimensional metal CeIrIn<sub>5</sub>"*

**CHRISTOPHE MORA**

Laboratoire Pierre Aigrain, ENS  
*"Fermi-liquid theory for Kondo quantum dots out-of-equilibrium"*

**RAYMOND OSBORN**

Argonne National Laboratory  
*"Coherent Band Excitations studied with Inelastic Neutron Scattering"*

**FRANK POLLMANN**

Technische Universität München  
*"Signatures of Dirac cones in a DMRG study of the Kagome Heisenberg model"*

**PRISCILA ROSA**

Los Alamos National Laboratory  
*"High-field and high-pressure phase diagram of CeRhIn<sub>5</sub> probed by optical dilatometry"*

**SUCHITRA SEBASTIAN**

Cambridge University  
*"Fermi surface in the absence of a Fermi liquid in the Kondo insulator SmB<sub>6</sub>"*

**FRANK STEGLICH**

MPI Chemical Physics of Solids  
*"Interplay between unconventional superconductivity and heavy-fermion quantum criticality"*

**LILING SUN**

Institute of Physics, Chinese Academy of Sciences  
*"Superconductivity in pressurized CeRhGe<sub>3</sub> and related non-centrosymmetric compounds"*

**ROSER VALENTI**

University of Frankfurt  
*"alpha-RuCl<sub>3</sub> beyond magnetic order"*

**YOUICHI YANASE**

Kyoto University  
*"Moibus topological superconductivity in UPT<sub>3</sub>"*

**GERTRUD ZWICKNAGL**

TU Braunschweig  
*"A review of strong correlations in heavy fermion systems"*

## **Spin-Systems and Magnetic Structures**

### **JAMES ANALYTIS**

University of California, Berkeley  
*"Field-induced intertwined orders in 3D Mott-Kitaev honeycomb  $\beta$ -Li<sub>2</sub>IrO<sub>3</sub>"*

### **ARNAB BANERJEE**

Oak Ridge National Laboratory  
*"Proximate Kitaev quantum spin liquid behavior in a honeycomb magnet"*

### **BENJAMIN CANALS**

Institut NEEL  
*"Artificial magnets as model systems : from the fragmentation of magnetization to the 6-vertex model"*

### **BEATRICE GRENIER**

Inac, Institute for Nanoscience and Cryogenics  
*"Topological quantum phase transition in the Ising-like antiferromagnetic spin chain BaCo<sub>2</sub>V<sub>2</sub>O<sub>8</sub>"*

### **ALANNAH HALLAS**

McMaster University  
*"Experimental Insights into Ground State Selection of Quantum XY Pyrochlores"*

### **STEPHEN HILL**

Florida State University and NHMFL  
*"Enhancing coherence in molecular spin qubits via atomic clock transitions"*

### **YUKO HOSOKOSHI**

Osaka Prefecture University  
*"Development of Organic Quantum Magnets"*

### **YUICHI KASAHARA**

Kyoto University  
*"Thermal Hall conductivity of a Kitaev spin liquid – signature of a Majorana chiral edge current"*

### **PAUL MCCLARTY**

Max Planck Institute for the Physics of Complex Systems  
*"Topological Triplon Modes and Bound States in a Shastry-Sutherland Magnet"*

### **YUKITOSHI MOTOME**

The University of Tokyo  
*"Zero-field Skyrmions with a High Topological Number in Itinerant Magnets"*

### **JULIA MUNDY**

Harvard University  
*"Design and Construction of Oxide Heterostructures with Emergent Multiferroic Properties"*

### **TSUYOSHI OKUBO**

The University of Tokyo  
*"Tensor Network Study of Kitaev Materials"*

### **YOSHINORI ONOSE**

The University of Tokyo  
*"Magnetolectrical control of nonreciprocal microwave response in a multiferroic helimagnet"*

### **NATALIA PERKINS**

University of Minnesota  
*"Probing Majorana's nodal structures in Kitaev spin liquids"*

### **CHRISTIAN RÜEGG**

Paul Scherrer Institut  
*"Spiral spin-liquid and the emergence of a vortex-like state in MnSc<sub>2</sub>S<sub>4</sub>"*

### **ANDERS SANDVIK**

Boston University  
*"Nearly Deconfined Spinons in the Heisenberg Antiferromagnet with Four-spin Interactions"*

### **VALERIO SCAGNOLI**

ETH Zurich  
*"Revealing magnetic configurations with X-ray magnetic nanotomography"*

### **KAIYOU WANG**

Institute of Semiconductors, Chinese Academy of Sciences  
*"Control ferromagnets at room temperature without external magnetic field"*

### **BRITTA WILLENBERG RYLL**

Helmholtz-Zentrum Berlin  
*"Complex Field-Induced States in Linarite PbCuSO<sub>4</sub>(OH)<sub>2</sub> with a Variety of High-Order Exotic Spin-Density Wave States"*

### **LIUSUO WU**

Oak Ridge National Laboratory  
*"Orbital-exchange and fractional quantum number excitations in an f-electron metal, Yb<sub>2</sub>Pt<sub>2</sub>Pb and quantum fluctuations in other Yb based compounds"*

## **Spintronics, Magnetization Dynamics, and Micromagnetics**

### **CHRISTOPH ADELMANN**

Imec  
*"Spin-wave device for radio frequency applications"*

### **ANNE BERNAND-MANTEL**

Institut Néel-CNRS  
*"Controlling magnetic skyrmions bubbles"*

### **YABIN FAN**

UCLA  
*"Electric-field control of spin-orbit torque in a magnetically doped topological insulator"*

**CHIRAG GARG**

Max Planck Institute of  
Microstructure Physics  
*"Dramatic effect of curvature on  
motion of chiral domain walls"*

**TAICHI GOTO**

Toyohashi University of Technology  
*"Spin wave circuits using forward  
volume mode in yttrium iron garnet"*

**WEI HAN**

Peking University  
*"Spin Current Quantum Materials"*

**YOSHIHIRO IWASA**

The University of Tokyo  
*"Superconductivity and spin-valley  
locking in TMDs"*

**JUNE-SEO KIM**

Daegu Gyeongbuk Institute of Science  
& Technology (DGIST)  
*"The correlations among the  
interfacial Dzyaloshinskii-Moriya  
interaction and other related interface  
effects probed by an inelastic light  
scattering"*

**KAB-JIN KIM**

Korea Advanced Institute of Science  
and Technology (KAIST)  
*"Antiferromagnetic spin dynamics at  
the angular momentum compensation  
temperature of ferrimagnets"*

**Nanomagnetism**

**GONG CHEN**

Lawrence Berkeley National  
Laboratory  
*"Chiral spin textures in in-plane  
magnets and graphene-induced DM  
Interaction"*

**SANGHOON LEE**

Korea University  
*"Investigation of spin orbit fields in  
ferromagnetic GaMnAs films and their  
uses for manipulating magnetization  
in ferromagnetic semiconductors"*

**LUQIAO LIU**

MIT  
*"Magnetic Switching with Topological  
Insulators and Compensated  
Ferrimagnets"*

**YURIY MOKROUSOV**

Institute for Advanced Simulation,  
Forschungszentrum Jülich  
*"A microscopic perspective at THz  
spinorbitronics"*

**TAKAHIRO MORIYAMA**

Kyoto University  
*"Spin torque control of  
antiferromagnetic moments in NiO"*

**NITIN SAMARTH**

Penn State University  
*"Topological spintronics"*

**CHRISTIAN STAMM**

ETH Zurich  
*"Spin Hall Effect Induced Magnetism  
in Nonmagnetic Metals"*

**HIROAKI SUKAGAWA**

National Institute for Materials  
Science (NIMS)  
*"Synthesis of spinel tunnel barriers for  
advanced spintronics devices"*

**THOMAS CRAWFORD**

University of South Carolina  
*"Magnetic nanoparticle assembly in  
extreme force gradients"*

**DAN DAHLBERG**

University of Minnesota  
*"Emergence of 1/f noise from  
ensembles of coupled nanomagnets"*

**ZHENSHENG TAO**

University of Colorado, Boulder  
*"Probing out-of-equilibrium laser-  
induced magnetic phase transition  
with fs resolution"*

**LAURA THEVENARD**

Institut des Nanosciences de Paris  
*"Manipulation of magnetization in  
ferromagnetic semiconductors by  
ultrafast laser pulses and acoustic  
waves"*

**TOENO VAN DER SAR**

Delft University of Technology  
*"Control and Local Measurement of  
the Spin Chemical Potential in a  
Magnetic Insulator"*

**EDO WAKS**

Institute for Research in Electronics  
and Applied Physics (IREAP),  
University of Maryland  
*"Activation of Microwave Fields in a  
Spin-Torque Nano-Oscillator by  
Neuronal Action Potentials"*

**SEONGHOON WOO**

Korea Institute of Science and  
Technology  
*"Topological manipulation of  
magnetic skyrmions in magnetic  
multilayers at room temperature"*

**HYUNSOO YANG**

National University of Singapore  
*"Bilinear magneto-electric resistance  
in topological surface states"*

**AHMED EL-GENDY**

University of Texas at El Paso  
*"Rare-earth free permanent  
nanomagnets: CoxC, CoFexC and  
MnxGa nanoparticles"*

**SEBASTIAN GLIGA**

The University of Glasgow  
*"Emergent dynamic chirality in a thermally driven artificial spin ratchet"*

**ALEXANDER GRUTTER**

NIST Center for Neutron Research  
*"Resolving the three-dimensional magnetic configuration of nanowire arrays using neutron techniques"*

**QING-LIN HE**

UCLA  
*"Topology and Antiferromagnetic Proximity Interactions at (Bi,Sb)<sub>2</sub>Te<sub>3</sub>-based Interfaces"*

**WANJUN JIANG**

Tsinghua University  
*"Spin-orbit physics in magnetic multilayer fims."*

**MATTHIAS BENJAMIN JUNGFLAISCH**

Argonne National Laboratory  
*"Spin dynamics in artificial spin ice"*

**MIGUEL KIWI**

Universidad de Chile  
*"Exchange-Bias in dipole coupled trilayers: experiment and theory"*

**CHRIS LEIGHTON**

AIST  
*"Ion gel gate-control of ferromagnetism in epitaxial perovskite oxides"*

**MARTINO POGGIO**

University of Basel  
*"Magnetization configurations and reversal of individual ferromagnetic nanotubes"*

**ADRIAN QUESADA**

Instituto de Cerámica y Vidrio  
*"Studying the 3D magnetization of ultrathin and antiphase-boundary free spinel crystals"*

**YAYOI TAKAMURA**

University of California, Davis  
*"Spin engineering in complex oxide heterostructures: From textures to spin ice"*

**KATHARINA THEIS-BRÖHL**

University of Applied Sciences Bremerhaven  
*"Self-assembled layering of magnetic nanoparticles in a ferrofluid onto solid surfaces"*

**JOOST VAN BREE**

Eindhoven University of Technology  
*"Atomic-Scale Magnetometry of Dynamic Magnetization"*

**PAOLO VAVASSORI**

CIC nanoGUNE Consolider  
*"Magneto-plasmonic nanostructures and crystals: principles and applications"*

**JOSE LUIS VICENT**

Universidad Complutense  
*"Probing artificial magnetic spin ices by vortex dynamics in hybrid systems."*

**STEPHEN WILSON**

University of California, Santa Barbara  
*"Interface and confinement driven spin correlations in titanate heterostructures"*

**DI YI**

Stanford University  
*"Emergent Interfacial Ferromagnetism and Perpendicular Magnetic Anisotropy in 5d Transition Metal Oxide Based Heterostructures"*

**Magnetic Materials and Technologies**

**JENNIFER ANDREW**

University of Florida  
*"Nanoparticle-based theranostics"*

**BERNARD DIÉNY**

SPINTEC  
*"Novel approach for nano-patterning magnetic tunnel junctions stacks at narrow pitch: A route towards high density STT-MRAM applications"*

**MICHAEL FARLE**

Universität Duisburg-Essen  
*"Functionalized Nanohybrids for magnetocalorics and permanent magnets"*

**VICTORINO FRANCO**

Sevilla University  
*"Quantitative analysis of the hysteresis of magnetocaloric materials"*

**PAULO FREITAS**

International Iberian Nanotechnology Laboratory  
*"TMR sensors: challenges and applications"*

**MATTHIAS GOTTWALD**

IBM T.J. Watson Research Center  
*"Advances in STT-MRAM materials"*

**SATOSHI HIROSAWA**

National Institute for Materials Science  
*"Permanent Magnets Beyond Nd-Dy-Fe-B"*

**JEAN ANNE INCORVIA**

University of Texas at Austin  
*"Low energy magnetic domain wall logic in short, narrow, ferromagnetic wires"*

**VINCENT JACQUES**

CNRS  
*"Imaging magnetism at the nanoscale with a single spin microscope"*

**CHEOLGI KIM**

Daegu Gyeongbuk Institute of Science & Technology (DGIST)

*"Micro-magnetic tracks for logical manipulation of living cells toward cells-on-chip"*

**HIROAKI KURA**

DENSO Corporation

*"Synthesis of single-phase L10-FeNi magnet powder by nitrogen insertion and topotactic extraction"*

**PING LIU**

University of Texas at Arlington

*"Rare-earth-free permanent magnets based on transition-metal nanowires: how far can we go?"*

**ASUKA NAMAI**

The University of Tokyo

*"Rhodium substituted  $\epsilon$ -iron oxide ( $\epsilon$ -Rh<sub>x</sub>Fe<sub>2-x</sub>O<sub>3</sub>: 0 ≤ x ≤ 0.14) nanomagnets, which exhibit high frequency millimeter wave absorption up to 209 GHz"*

**HENDRIK OHLDAG**

SLAC National Accelerator Laboratory

*"Ultrafast and Very Small: Discover Nanoscale Magnetism With Picosecond Time Resolution Using X-Rays"*

**ECKHARD QUANDT**

University of Kiel

*"Magnetostrictive multilayers for magnetoelectric magnetic field sensors"*

**RAMAMOORTHY RAMESH**

University of California, Berkeley

*"Electric Field Control of Magnetism"*

**JUSTIN SHAW**

NIST

*"Ultra-low damping materials"*

**ANDRZEJ STUPAKIEWICZ**

University of Bialystok

*"Ultrafast Non-dissipative Photo-magnetic Recording"*

**JAN-ULRICH THIELE**

Seagate Technology

*"Heat Assisted Magnetic Recording – Next Generation Mass Storage Technology"*