

## Confirmed Invited Speakers

as of July 13, 2018

### PLENARY & AWARDEE SPEAKERS

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**ROBERT BUHRMAN**

Cornell University

**TOMÁŠ JUNGWIRTH**

Academy of Sciences of the Czech Republic

**SATORU NAKATSUJI**

The University of Tokyo

**NICOLA SPALDIN**

ETH Zurich

**WINNER 2018 IUPAP YOUNG SCIENTIST PRIZE IN MAGNETISM**

**2016: WEI HAN**

Peking University

**2017: LUQIAO LIU**

Massachusetts Institute of Technology

**2018: SHINICHIRO SEKI**

RIKEN

**2018 IUPAP MAGNETISM AWARD AND NÉEL MEDAL AWARDEES**

**SAMUEL D. BADER**

Argonne National Laboratory

**RAMAMOORTHY RAMESH**

University of California, Berkeley

**KANG I. WANG**

University of California, Los Angeles

### SYMPOSIA

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#### Computing With Spintronic Devices

**PAUL CROWELL**

University of Minnesota

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

**SHUNSUKE FUKAMI**

Tohoku University, RIEC

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

**JULIE GROLLIER**

Université Paris-Sud, CNRS/Thales

*"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

*"Quantum criticality in iron pnictides and beyond"*

**KAI GRUBE**

Karlsruhe Institute of Technology

*"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**

University of California, Los Angeles

*"Magnonic condensates and superfluids"*

## INVITED SPEAKERS

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### Strongly Correlated Electrons Systems (SCES)

**HIROSHI AMITSUKA**

Hokkaido University  
*"Tests for Magnetoelectric Effects on Antiferromagnetic Metals"*

**JORDAN BAGLO**

University of Cambridge  
*"High-Pressure Fermiology of the Metallized Mott Insulator NiS<sub>2</sub>"*

**ANNICA BLACK-SCHAFFER**

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

**STUART BROWN**

University of California  
*"Normal state properties of Sr<sub>2</sub>RuO<sub>4</sub> under strained conditions examined by 17O NMR"*

**DANIEL BRAITHWAITE**

Inac, CEA, U Grenoble Alpes  
*"Dimensionality driven enhancement of ferromagnetic superconductivity in URhGe"*

**ONUR ERTEN**

Arizona State University  
*"Skyrme Insulators: Insulators at the Brink of Superconductivity"*

**MEYDI FERRIER**

Université Paris-Sud LPS  
*"Quantum noise measurement and universal quantum fluctuations in a Kondo-Correlated Quantum Dot out-of-equilibrium"*

**MARK FISCHER**

ETH Zurich  
*"Superconductivity Without Inversion and Time-Reversal Symmetries"*

**CHUNYU GUO**

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

**FRANZ HASLBECK**

TUM Institute for Advanced Studies; Technical University of Munich  
*"Interplay of Itinerant and Localized Spin Fluctuations in the Ferromagnetic Superconductor UGe<sub>2</sub>"*

**LIN JIAO**

MPI 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"*

**WILLIAM KNAFO**

LNCMI Toulouse / CNRS  
*"Squeezing out hidden-order in URu<sub>2</sub>Si<sub>2</sub> under combined pressure and magnetic field"*

**GEORG KNEBEL**

INAC, CEA, U Grenoble Alpes  
*"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**

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

**FREDERIC MILA**

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

**PHILIP MOLL**

MPI for Chemical Physics of Solids  
*"One-dimensional superconductivity in the three-dimensional metal CeIn<sub>5</sub>"*

**CHRISTOPHE MORA**

U Paris Diderot, LPA  
*"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**

TU Munich  
*"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 CeRhIn5 probed by optical dilatometry"*

**SUCHITRA SEBASTIAN**

Cambridge University  
*"Fermi surface in the absence of a Fermi liquid in the Kondo insulator SmB6"*

**EDBERT SIE**

Stanford University  
*"Ultrafast Manipulation of Topological Properties using Shear Strain in a Weyl Semimetal"*

**FRANK STEGLICH**

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

**LILING SUN**

Institute of Physics, Chinese Academy of Science  
*"Superconductivity in pressurized CeRhGe3 and related non-centrosymmetric compounds"*

**ROSER VALENTÍ**

Goethe University Frankfurt  
*"Alpha-RuCl3 beyond magnetic order"*

**YOUICHI YANASE**

Kyoto University  
*"Moibus topological superconductivity in UPT3"*

**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  $\beta$ -Li2IrO3"*

**ARNAB BANERJEE**

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

**BENJAMIN CANALS**

Institut NEEL, CNRS, U Grenoble Alpes  
*"Artificial magnets as model systems : from the fragmentation of magnetization to the 6-vertex model"*

**BEATRICE GRENIER**

Inac, CEA, U Grenoble Alpes  
*"Topological quantum phase transition in the Ising-like antiferromagnetic spin chain BaCo2V2O8"*

**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**

MPI 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"*

**TOBY PERRING**

STFC Rutherford Appleton Laboratory  
*"Magnetic Excitations in the Itinerant Electron Ferromagnet Iron Measured Throughout the Brillouin Zone by Neutron Scattering"*

**ANDREW PRINCEP**

Rutherford Appleton Laboratory;  
University of Oxford  
*"The Final Chapter in the Saga of YIG"*

**CHRISTIAN RÜEGG**

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

**JUDIT ROMHANYI**

Okinawa Institute of Science and Technology  
*"Spin-Orbit Dimers and Non-Collinear Phases in d<sub>1</sub> Cubic Double Perovskites"*

**ANDERS SANDVIK**

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

**VALERIO SCAGNOLI**

ETH Zurich/Paul Scherrer Institute  
*"Revealing magnetic configurations with X-ray magnetic nanotomography"*

**SERGEY STRELTSOV**

M.N. Miheev Institute of Metal Physics UB of RAS  
*"Magnetic properties of FeO<sub>2</sub> and FeO<sub>2</sub>Hx - novel constituents of Earth's lower mantle"*

**RINA TAKAGI**

RIKEN Center for Emergent Matter Science  
*"Multiple-q Helimagnetism in an Itinerant Hexagonal Magnet"*

**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"*

**YONGGANG ZHAO**

Tsinghua University  
*"Electric-field manipulation of magnetism in mesoscopic multiferroic heterostructures"*

**Spintronics, Magnetization Dynamics, and Micromagnetics**

**CHRISTOPH ADELMANN**

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

**ANNE BERNARD-MANTEL**

Institut NEEL, CNRS, U Grenoble Alpes  
*"Controlling magnetic skyrmions bubbles"*

**XIN FAN**

University of Denver  
*"Spin galvanic effect with spin rotation symmetry"*

**YABIN FAN**

University of California, Los Angeles  
*"Electric-field control of spin-orbit torque in a magnetically doped topological insulator"*

**CHIRAG GARG**

MPI 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"*

**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"*

**SERGIO REZENDE**

Universidade Federal de Pernambuco  
*"Magnon-phonon conversion in a nonuniform magnetic field and detection of the phonon spin"*

**NITIN SAMARTH**

Penn State University  
*"Topological spintronics"*

**TAKURO SATO**

RIKEN Center for Emergent Matter Science  
*"Current-induced skyrmion dynamics probed by resistance noise spectroscopy"*

**Nanomagnetism**

**GONG CHEN**

University of California, Davis  
*"Chiral spin textures in in-plane magnets and graphene-induced DM Interaction"*

**STEVE CONOLLY**

University of California, Berkeley  
*"Magnetic particle imaging: current state and future trends"*

**KATRIN SCHULTHEISS**

Helmholtz-Zentrum Dresden - Rossendorf  
*"How to Generate Whispering Gallery Magnons"*

**LIBOR ŠMEJKAL**

Johannes Gutenberg University; Academy of Sciences of the Czech Republic  
*"Classification of topological antiferromagnets for 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"*

**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, Sorbonne University  
*"Manipulation of magnetization in ferromagnetic semiconductors by ultrafast laser pulses and acoustic waves"*

**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"*

**NICOLAS THIERY**

CEA-Grenoble  
*"Spin-waves propagation in ultra-thin film of YIG driven in a non-equilibrium state by large spin-orbit torque"*

**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 MnxC nanomagnets"*

**ANTONIO GARCIA-MARTIN**

Instituto de Microelectrónica de Madrid. IMM (CNM-CSIC)  
*"Resonant Magneto-Optically Active Structures: External Control and Enhancement"*

**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**

University of California, Los Angeles  
*"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 films."*

**MATTHIAS BENJAMIN JUNGFLEISCH**

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

**MIGUEL KIWI**

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

**JANIS KLIAVA**

Université de Bordeaux  
*"Magnetic Nanoparticles in Borate Glasses: Theory, Experiment, Modelling, Application Prospective"*

**CHRIS LEIGHTON**

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

**KAI LIU**

University of California, Davis  
 Georgetown University  
*"Magneto-Ionic Control of Exchange Bias"*

**JUAN PALMA**

Universidad Central de Chile; Center for the Development of Nanoscience and Nanotechnology CEDENNA  
*"Magnetic Properties of Fe<sub>3</sub>O<sub>4</sub> Antidots Arrays Synthesized by Atomic Layer Deposition and Focused Ion Beam Lithography"*

**MARTINO POGGIO**

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

**ADRIAN QUESADA**

Instituto de Cerámica y Vidrio, CSIC  
*"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  
*"Magneto-plasmonic nanostructures and crystals: principles and applications"*

**JOSE LUIS VICENT**

Universidad Complutense de Madrid  
*"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**

**JOÃO AMARAL**

Universidade de Aveiro, Portugal  
*"Computational Search for Giant Magnetocaloric Materials: Application to MnAs"*

**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"*



**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"*

**HEIKE HERPER**

Uppsala University  
*"Optimizing the magnetic performance of REFe<sub>12</sub>-xMx phases – an ab initio study"*

**SATOSHI HIROSAWA**

National Institute for Materials Science (NIMS)  
*"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/LPS, Université Paris-Sud  
*"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 ε-iron oxide (ε-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 OHL DAG**

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 magnetolectric magnetic field sensors"*

**RAMAMOORTHY RAMESH**

University of California, Berkeley  
*"Electric Field Control of Magnetism"*

**SOPHIE RIVOIRARD**

Institut Néel CNRS  
*"Recycling and Valorisation of Rare Earth-based magnets"*

**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"*