



***Trends in MAGnetism 2021, 6-10 September,
Cefalù, Palermo (Italy)***

List of presentations

2 September 2021





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CODE	Technical Categories
AA	Magnetization dynamics, damping and ultrafast switching
AB	Antiferromagnetic spintronics. Antiferromagnetic and ferrimagnetic materials
AC	Spintronics for unconventional computing
AD BD	Statics and dynamics of solitons (Domain walls and Skyrmions, etc)
AE BE	Spin waves, magnonics and magnonic applications, Opto-magnonics. Hybrid magnonic heterostructures. Spin waves on curved surfaces and 3D heterostructures
AF BF CF	Novel magnetic materials and multilayers. Materials properties. Magnetism and superconductivity
AG	Static and dynamic spin Hall and spin-orbital torques
AH	Micromagnetic modeling and hysteresis
AI	Spin injection and spin-dependent tunneling
LIVE	Session Lecture
BA	Interdisciplinary talks
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AA: Magnetization dynamics, damping and ultrafast switching

AA	01	Stefano Bonetti , Ca Foscari University of Venice, Italy - <i>Inertial spin dynamics in ferromagnets (invited)</i>
AA	02	Andrei Kirilyuk , Radboud University, The Netherlands - <i>Nonthermal all-optical switching of magnetization: mechanisms and challenges (invited)</i>
AA	03	Stephane Mangin , Université de Lorraine, France - <i>Single ultra-fast spin current pulse to switch magnetization (invited)</i>
AA	04	Shigemi Mizukami , Tohoku University, Japan - <i>All-optical probe of magnetization dynamics in synthetic antiferromagnets (invited)</i>
AA	05	Martina Basini , Stockholm University, Sweden - <i>Towards ultrafast magnetization creation and control via dynamical multiferroicity</i>
AA	06	Antoni Ignacy Frej , University of Bialystok, Poland - <i>All-optical magnetic recording with single L-band laser pulse in YIG:Co</i>
AA	07	<i>withdrawn</i>
AA	08	Quentin Remy , Université de Lorraine, France - <i>Control of Single Pulse All Optical Magnetization Switching of Ferromagnets</i>

AB: Antiferromagnetic spintronics. Antiferromagnetic and ferrimagnetic materials

AB	01	Olena of Gomonay , Johannes Gutenberg University, Germany - <i>Current-induced switching in antiferromagnets: role of thermal heating and strain effects (invited)</i>
AB	02	Vincent Jacques , Université de Montpellier and CNRS, France - <i>Exploring antiferromagnetic order at the nanoscale with a single spin microscope (invited)</i>
AB	03	Tomas Jungwirth , University of Nottingham, United Kingdom - <i>Ferromagnets, antiferromagnets and altermagnets (invited)</i>
AB	04	Jairo Sinova , Johannes Gutenberg University Mainz, Germany - <i>Topological spintronics in antiferromagnets and the crystal Hall effect (invited)</i>
AB	05	<i>withdrawn</i>
AB	06	Silvia Damerio , University of Groningen, The Netherlands - <i>Spin Hall Magnetoresistance in Pt/CaFe₂O₄ multi-domain thin films</i>
AB	07	<i>withdrawn</i>
AB	08	Hai Zhong , Qnami AG, Switzerland - <i>Quantitative imaging of antiferromagnetic spin cycloidal textures on strain engineered BiFeO₃ thin films with a scanning nitrogen-vacancy magnetometer</i>
AB	09	<i>withdrawn</i>
AB	10	Victor Lopez Dominguez , Northwestern University, USA - <i>Antiferromagnetic PtMn memory devices controlled by electric current</i>
AB	11	Luis Sánchez-Tejerina , University of Salamanca, Spain - <i>Ferro-, ferri-, and antiferromagnetic materials within the same micromagnetic framework</i>
AB	12	Michał Ślęzak , AGH University of Science and Technology, Poland - <i>Field-free switching between orthogonal spin states in antiferromagnetic NiO(111) on Fe(110)</i>





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AC: Spintronics for unconventional computing

AC	01	Supriyo Bandyopadhyay , Virginia Commonwealth University, USA - <i>Straintronics for Unconventional Computing</i> (invited)
AC	02	Kerem Yunus Camsari , Purdue University, USA - <i>p-bits for Quantum Inspired Algorithms</i> (invited)
AC	03	Massimiliano Di Ventra , University of California, USA - <i>Digital Memcomputing: from logic to dynamics to topology</i> (invited)
AC	04	Julie Grollier , Université Paris Saclay, France - <i>Microwave spintronic neural networks</i> (invited)
AC	05	Eleonora Raimondo , University of Messina, Italy - <i>Study of the robustness of neural networks based on spintronic neurons</i>
AC	06	Alberto Riminucci , Institute for the Study of Nanostructured Materials, Italy - <i>Organic spintronic multilevel resistive switching devices as synapses for neuromorphic computing</i>
AC	07	<i>withdrawn</i>
AC	08	Pietro Tullio , Politecnico of Bari, Italy - <i>Numerical study of noise-induced convergence of Ising machines based on spintronic oscillators</i>
AC	09	Kang L Wang , University of California, USA - <i>Topological spintronics: dynamics and symmetry breaking for high speed and energy efficiency memory</i> (invited)

AD - BD: Statics and dynamics of solitons (Domain walls and Skyrmions, etc)

AD	01	Olivier Boulle , SPINTEC (Univ. Grenoble Alpes/CNRS/CEA), France - <i>Antiferromagnetic skyrmions and skyrmion racetrack defined by light ion irradiation for skyrmions logics</i> (invited)
AD	02	Pietro Gambardella , ETH Zurich, Switzerland - <i>Coupled nanomagnets and domain wall logic circuits enabled by the Dzyaloshinskii-Moriya interaction</i> (invited)
AD	03	Kai Liu , Georgetown University, USA - <i>Chemisorption-Induced Dzyaloshinskii-Moriya Interactions and Spin Textures</i> (invited)
AD	04	Christopher Marrows , University of Leeds, United Kingdom - <i>Skyrmions in chiral magnetic multilayers</i> (invited)
AD	05	Peter Fischer , Lawrence Berkeley National Laboratory, USA - <i>Advanced x-ray characterization of novel topological spin textures at their fundamental length and time scales</i> (invited)
AD	06	<i>withdrawn</i>
AD	07	<i>withdrawn</i>
AD	08	Stavros Komineas , University of Crete, Greece - <i>Traveling skyrmions in chiral antiferromagnets</i>
AD	09	Konstantin Gusliyenko , Universidad del País Vasco, Spain - <i>Ferromagnetic skyrmion spin-torque nano-oscillators</i>
AD	10	<i>withdrawn</i>
AD	11	Krisztian Palotas , Wigner Research Center for Physics, Hungary - <i>Magnetic skyrmions probed by SP-STM: topology imprinted on the charge current and spin transfer torque</i>
AD	12	<i>withdrawn</i>





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AD	13	Börge Göbel , Martin-Luther-Universität, Germany - <i>Beyond skyrmions: Alternative nano-objects for spintronics</i>
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BD	01	Luis Lopez-Diaz , University of Salamanca, Spain - <i>Domain wall motion by means of magnonic currents in antiferromagnets (invited)</i>
BD	02	<i>withdrawn</i>
BD	03	Hans J. Hug , Empa - Swiss Federal Laboratories for Materials Science and Technology, Switzerland - <i>Quantitative magnetic force microscopy – an experimental tool to develop thin film systems supporting skyrmion bobbers at room temperature (invited)</i>
BD	04	Oleg Tretiakov , University of New South Wales, Australia - <i>Fast domain wall motion in chiral ferromagnets and ferrimagnetic insulators (invited)</i>
BD	05	Felix Büttner , Helmholtz-Zentrum Berlin, Germany - <i>Fluctuation-mediated picosecond nucleation of magnetic skyrmions</i>
BD	06	<i>withdrawn</i>
BD	07	Mai Kameda , Tohoku University, Japan - <i>Attractive inter-skyrmion couplings induced by distorted skyrmions</i>
BD	08	Dimitris Kechrakos , School of Pedagogical and Technological Education (ASPETE), Greece - <i>Formation and electrical detection of skyrmion lattice on cylindrical nanotubes</i>
BD	09	<i>withdrawn</i>
BD	10	Alexander Mook , University of Basel, Switzerland - <i>Quantum damping of skyrmion crystal eigenmodes due to spontaneous quasiparticle decay</i>
BD	11	<i>withdrawn</i>
BD	12	<i>withdrawn</i>
BD	13	Riccardo Tomasello , Politecnico di Bari, Italy - <i>Role of current driven torques on skyrmion motion in Antiferromagnets</i>

AE - BE: Spin waves, magnonics and magnonic applications, Opto-magnonics. Hybrid magnonic heterostructures. Spin waves on curved surfaces and 3D heterostructures

AE	01	Burkard Hillebrands , Technische Universität Kaiserslautern, Germany - <i>Magnonic qubit computing (invited)</i>
AE	02	Olivier Klein , INAC-Spintec, France - <i>Coherent long-range coupling between spins by chiral phonons (invited)</i>
AE	03	Denys Makarov , Helmholtz-Zentrum Dresden-Rossendorf e.V., Germany - <i>Designing chiral magnetic responses by tailoring geometry of thin films: curvilinear ferro- and antiferromagnets (invited)</i>
AE	04	Axel Hoffmann , Argonne National Laboratory, USA - <i>Hybridized Magnons in Thin Film Systems (invited)</i>
AE	05	Mattia Bassotti , Università di Perugia, Italy - <i>A micromagnetic study of spin-wave eigenmodes of isolated, twins and chains of Néel skyrmions</i>
AE	06	Jorrit Hortensius , Delft University of Technology, The Netherlands - <i>Coherent spin-wave transport in an antiferromagnet</i>
AE	07	<i>Withdrawn</i>





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AE	08	Carlos Gonzalez-Ballester , Institute for Quantum Optics and Quantum Information, Austria - <i>Spin-Steered Magnonics</i>
AE	09	<i>withdrawn</i>
AE	10	<i>withdrawn</i>
AE	11	Isabella Rahel Boventer , Université Paris-Saclay, France - <i>Reconfigurable magnonic crystal based on multiferroic-ferromagnetic heterostructures</i>
AE	12	Alexey B. Ustinov , St. Petersburg Electrotechnical University, Russia - <i>Nonlinear spin-wave logic gates based on magnetic films</i>

BE	01	<i>withdrawn</i>
BE	02	Daniela Petti , Politecnico di Milano, Italy - <i>Nanoscale engineered spin textures for magnonics (invited)</i>
BE	03	Vittorio Basso , INRiM, Italy - <i>Electric field effect on spin waves spin currents</i>
BE	04	Sebastian Alejandro Diaz , University of Basel, Switzerland - <i>Chiral hinge magnons in second-order topological magnon insulators</i>
BE	05	Tomoki Hirose , University of Tokyo, Japan - <i>Magnonic quadrupole topological insulator in antiskyrmion crystals</i>
BE	06	Mateusz Gołbiewski , Uniwersytetu Poznańskiego, Poland - <i>Control and manipulation of self-images using phase/amplitude change of input wave fronts and potential application in magnonics</i>
BE	07	Alessandra Manzin - , INRiM, Italy - <i>Application of magnonic crystals in magnetic particle detection</i>
BE	08	Shin Miyahara , Fukuoka University, Japan - <i>Anomalous spin wave excitation in helical magnets</i>
BE	09	Christina Psaroudaki , California Institute of Technology, USA - <i>Spin Wave Radiation by a Topological Charge Dipole</i>
BE	10	Davi Röhe Rodrigues , Johannes Gutenberg-University of Mainz, Germany - <i>Exotic spinwave effects in topological magnetic textures</i>
BE	11	Alexey B. Ustinov , St. Petersburg Electrotechnical University, Russia - <i>Effect of vanadium dioxide film on the magnonic crystal band-gaps</i>
BE	12	Alexis Wartelle , Technical University of Munich, Germany - <i>Investigation of caustic spin wave beams in soft thin films</i>

AF - BF - CF: Novel magnetic materials and multilayers. Materials properties. Magnetism and superconductivity

AF	01	<i>withdrawn</i>
AF	02	Gisela Schütz , Max Planck Institute for Intelligent Systems, Germany - <i>Magnetic parameters in reduced dimensions (invited)</i>
AF	03	Vittorio Basso , INRiM, Italy - <i>The magnon mean scattering time from the spin Seebeck effect</i>
AF	04	Irina Bobkova , Moscow Institute of Physics and Technology, Russia - <i>Long-range interaction of magnetic moments in a coupled system of S/F/S Josephson junctions with anomalous ground state phase shift</i>
AF	05	Yonatan Calahorra , Technion-IIT, Israel - <i>Magnetization and magnetoresistance of Ni/porous-GaN composites</i>





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AF	06	<i>withdrawn</i>
AF	07	<i>withdrawn</i>
AF	08	Tomáš Maleček , Charles University, Czech Republic - <i>Influence of static and dynamic epitaxial strain on La₂/3Sr₁/3MnO₃ ultrathin films</i>
AF	09	Kamil Nowak , AGH University of Science and Technology, Poland - <i>Influence of introduction small amounts of metallic dopants on topological surface states of Bi₂Se₃ topological insulator</i>
AF	10	<i>withdrawn</i>
AF	11	Silvia Tacchi , Università di Perugia, Italy - <i>Tailoring magnetic properties of Pt/Co multilayers by helium ion irradiation</i>
AF	12	<i>withdrawn</i>

BF	01	Christos Panagopoulos , Nanyang Technological University, Singapore - <i>Non-collinear magnetism on proximate superconductors (invited)</i>
BF	02	Pushendra Gupta , National Institute of Science Education and Research (NISER), India - <i>Simultaneous observation of anti-damping and inverse spin Hall effect in La_{0.67}Sr_{0.33}MnO₃/Pt bilayers system</i>
BF	03	Karel Carva , Charles University Prague, DCMP, Prague, Czech Republic - <i>Complex interplay of magnetism and structure in 2D van der Waals halide VI₃</i>
BF	04	Elena A Denisova , Kirensky Institute of Physics FRC KSC SB RAS, Russia - <i>Magnetic properties of 3-d metal rods with gradients of composition produced by electroless deposition</i>
BF	05	<i>withdrawn</i>
BF	06	Hubert Głowiński , Institute of Molecular Physics Polish Academy of Sciences, Poland - <i>The correlation between orbital magnetic moments and effective magnetic anisotropy in Au/CoFeB/Au systems</i>
BF	07	Maria Angeles Laguna-Marco , Universidad de Zaragoza, Spain - <i>On the magnetism of novel Ir_{1-x}CrxO₂ thin films</i>
BF	08	Piotr Mazalski , University of Białystok, Poland - <i>Strong interfacial Dzyaloshinskii-Moriya interaction and magnetic anisotropy in NiO/Co/Pt trilayers</i>
BF	09	Cinthia Piamonteze , Photon Science Division, Switzerland - <i>Tuning magnetic and electronic properties of NdNiO₃ by a proximity layer</i>
BF	10	Aleksei Valerevich Shestakov , FRC Kazan Scientific Center of RAS, Russia - <i>Temperature features of magnetic resonance of Mn_{0.13}Hg_{0.87}Te</i>
BF	11	<i>withdrawn</i>
BF	12	Anna Zakharova , Paul Scherrer Institute, Switzerland - <i>Interplay between magnetism and interface-induced effects in ultra-thin manganites</i>

CF	01	Javad Shabani , New York University, USA - <i>Progress in realizing topological superconductivity in planar Josephson junctions (invited)</i>
CF	02	Daniel E. Buegler , Peter Grünberg Institut (PGI-6), Forschungszentrum Jülich, Germany - <i>Towards molecular hybrid spintronic devices: Novel ferrocene- and pyrene- based cyclophane chemisorbed on ferromagnetic Co(111) nanoislands</i>
CF	03	<i>withdrawn</i>
CF	04	Ilya Eremin , Ruhr-University Bochum, Germany - <i>Magnetic skyrmionic textures in proximity to a superconductor: vortex-skyrmion interaction and Meissner currents</i>





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CF	05	<i>withdrawn</i>
CF	06	<i>withdrawn</i>
CF	07	Dominik Legut , VSB-Technical University of Ostrava, Czech Republic - <i>Lattice vibrations and trimeron order of the Verwey transition in magnetite</i>
CF	08	<i>withdrawn</i>
CF	09	<i>withdrawn</i>
CF	10	Christian Rinaldi , Politecnico di Milano, Italy - <i>Room-temperature and non-volatile electric control of spin currents generation in the ferroelectric semiconductor GeTe</i>
CF	11	Irina Vazhenina , Federal Research Center KSC SB RAS, Russia - <i>The study of three-layer films FeNi/Dy/FeNi in wide temperature range by resonance method</i>

AG: Static and dynamic spin Hall and spin-orbital torques.

AG	01	Johan Åkerman , University of Gothenburg, Sweden - <i>Microwave signal generation and neuromorphic computing using large spin Hall nano-oscillator arrays</i> (invited)
AG	02	<i>withdrawn</i>
AG	03	Silvia Picozzi , Istituto CNR-SPIN Chieti, Italy - <i>Spin-orbit coupling: an endless source of complex magnetism</i> (invited)
AG	04	Lucian Prejbeanu , SPINTEC, Univ. Grenoble Alpes, CEA/CNRS, France - <i>MRAM adoption in microelectronics: status and perspectives</i> (invited)
AG	05	Andrei Slavin , Oakland University, USA - <i>Tuneable receiver of sub-THz signals based on an antiferromagnet</i> (invited)
AG	06	Hyunsoo Yang , National University of Singapore, Singapore - <i>Spin-orbit torque of topological spin textures and magnons</i> (invited)
AG	07	Weisheng Zhao , Beihang University, P.R. China - <i>From Spin Transfer Torque (STT) to Toggle Spin Torque (TST) for the next generation of MRAM</i> (invited)
AG	08	Massimiliano d'Aquino , University of Naples Federico II, Italy - <i>Chaotic dynamics and thermal switching in ac-driven nanomagnets</i>
AG	09	Roberto de Orio , TU Wien, Austria - <i>Deterministic spin-orbit switching scheme for an array of perpendicular MRAM cells suitable for large scale integration</i>
AG	10	<i>withdrawn</i>
AG	11	Esteban José Garzón , University of Calabria, Italy - <i>Dual-Barrier MTJ Based Cryogenic STT-MRAMs</i>
AG	12	Andrea Grimaldi , University of Messina, Italy - <i>Probabilistic computing solver applied to MAX-SAT instances</i>
AG	13	Luciano Mazza , Politecnico of Bari, Italy - <i>Spin-torque diodes for computing multiplication</i>
AG	14	Brindaban Ojha , National Institute of Science Education and Research (NISER), India - <i>Driving skyrmions with low threshold current density in amorphous CoFeB thin film</i>
AG	15	Gaspere Varvaro , CNR - ISM, nM2-Lab, Italy - <i>SAF-based perpendicularly magnetized GMR spin valves on large-area flexible substrates</i>

AH: Micromagnetic modeling and hysteresis

AH	01	Patrizio Ansalone , Istituto Nazionale di Ricerca Metrologica, Italy - <i>Magnetization transport and local exchange invariance</i>
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AH	02	Hari Rimal , University of Perugia, Italy - <i>Ring Cores of Soft Ferrite in Power Electronics: a Macro-Magnetic Approach to the Modelling in Time Domain</i>
AH	03	Simone Quondam Antonio , University of Perugia, Italy - <i>Hysteresis modelling in additively manufactured FeSi magnetic cores</i>
AH	04	<i>withdrawn</i>
AH	05	Simone Quondam Antonio , University of Perugia, Italy - <i>Deep neural networks for the efficient computation of hysteresis processes in GO Fe-Si steel sheets under generic supply excitations</i>
AH	06	Dmitry Berkov , General Numerics Research Lab, Germany - <i>Switching rate computation in full-scale micromagnetic simulations</i>
AH	07	<i>withdrawn</i>
AH	08	Vitalii V. Vitko , St. Petersburg Electrotechnical University, Russia - <i>Investigation of microwave bistability in spin-wave active ring resonator</i>

AI: Spin injection and spin-dependent tunneling

AI	01	Yukio Nozaki , Keio University, Japan - <i>Spin current generation using vorticity in solids</i> (invited)
AI	02	J.-Carlos Rojas-Sanchez , Université de Lorraine, CNRS, Institute Jean Lamour, France - <i>Giant self-production of spin current and self-spin-orbit torque in ferrimagnetic materials</i> (invited)
AI	03	Guoqiang Yu , University of Chinese Academy of Sciences, China - <i>Current-driven magnetization switching in a van der Waals material-based spintronic device</i> (invited)
AI	04	Cecile Grezes , Université Grenoble Alpes / CEA / IRIG/ SPINTEC, France - <i>Unidirectional spin-Hall magnetoresistance in HgTe topological insulator - ferromagnet heterostructures</i>
AI	05	Cecile Grezes , Université Grenoble Alpes / CEA / IRIG/ SPINTEC, France - <i>Non-volatile electric-field control of spin-orbit torques in perpendicular ferromagnet - SrTiO₃ system</i>
AI	06	Jean Anne Incorvia , The University of Texas at Austin, USA - <i>Transport in Scandium Nitride Magnetic Tunnel Junctions Using First Principles</i>

LIVE: Session Lecture

LIVE	01	Albert Fert , Université Paris-Saclay, France - <i>From topology to devices</i> (Nobel Lecture)
LIVE	02	Mathias Kläui , Johannes Gutenberg-University Mainz, Germany - <i>Antiferromagnetic Insulatronics: Spintronics without magnetic fields and moving electrons</i> (Distinguished Lecture)

BA: Interdisciplinary talks

BA	01	Montserrat Rivas , University of Oviedo, Spain - <i>A new generation of rapid diagnostic tests: the role of magnetic nanoparticles</i> (invited)
BA	02	Stephan Roche , Institució Catalana de Recerca i Estudis Avancats, Spain - <i>Towards van der Waals Heterostructures-based Spintronics</i> (invited)
BA	03	Nicola Spaldin , ETH Zurich, Switzerland - <i>Hidden, entangled and resonating order</i> (invited)
BA	04	<i>withdrawn</i>





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BA	05	Subhankar Bedanta , National Institute of Science Education and Research (NISER), India - <i>Spinterface with fullerene</i>
BA	06	<i>withdrawn</i>
BA	07	Riccardo Bertacco , Politecnico di Milano, Italy - <i>TMek: a quantitative lab-on-chip rapid diagnostic test for malaria</i>
BA	08	Fabio Corti , Università degli Studi di Perugia, Italy - <i>Inductor SPICE model including non-linearity due to non-uniform magnetic field</i>
BA	09	Luca Nesi , Politecnico di Milano and Istituto di Fotonica e Nanotecnologie IFN-CNR, Italy - <i>Graphene-based ultrathin magnetic membranes for spin polarimetry</i>
BA	10	<i>withdrawn</i>
BA	11	Paola Maria Tiberto , INRIM, Italy - <i>Modelling of heating efficiency in magnetic hyperthermia: effect of non-harmonic driving field</i>
BA	12	Federica Celegato , INRIM, Italy - <i>FePd nanoparticles by solid-state dewetting for magnetic hyperthermia</i>
BA	13	Paweł Mazurek , AGH University of Science and Technology, Poland - <i>Influence of the position of the steel wire rope in relation to the Earth's magnetic field on the diagnostics with the use of MFAM Technology</i>

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