



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

Schedule-at-a-Glance

8 July 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. 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 - <i>Inertial spin dynamics in ferromagnets</i> (invited)
AA	02	Andrei Kiriliouk - <i>Nonthermal all-optical switching of magnetization: mechanisms and challenges</i> (invited)
AA	03	Stephane Mangin - <i>Single ultra-fast spin current pulse to switch magnetization</i> (invited)
AA	04	Shigemi Mizukami - <i>All-optical probe of magnetization dynamics in synthetic antiferromagnets</i> (invited)
AA	05	Martina Basini - <i>Towards ultrafast magnetization creation and control via dynamical multiferroicity</i>
AA	06	Antoni Ignacy Frej - <i>All-optical magnetic recording with single L-band laser pulse in YIG:Co</i>
AA	07	Ezio Iacocca - <i>Ultrafast domain dilation induced by optical pumping in ferromagnetic CoFe/Ni multilayers</i>
AA	08	Quentin Remy - <i>Control of Single Pulse All Optical Magnetization Switching of Ferromagnets</i>

AB: Antiferromagnetic spintronics. Antiferromagnetic and ferrimagnetic materials

AB	01	Olena of Gomonay - <i>Current-induced switching in antiferromagnets: role of thermal heating and strain effects</i> (invited)
AB	02	Vincent Jacques - <i>Exploring antiferromagnetic order at the nanoscale with a single spin microscope</i> (invited)
AB	03	Tomas Jungwirth - <i>Ferromagnets, antiferromagnets and altermagnets</i> (invited)
AB	04	Jairo Sinova - <i>Topological spintronics in antiferromagnets and the crystal Hall effect</i> (invited)
AB	05	Raymond Bishop - <i>Quantum Phase Diagram of a Frustrated Spin-1/2 Heisenberg Antiferromagnet on a Square-Lattice Bilayer</i>
AB	06	Silvia Damerio - <i>Spin Hall Magnetoresistance in Pt/ CaFe₂O₄ multi-domain thin films</i>
AB	07	Aleksei Drovosekov - <i>Magnetization dynamics in layered Fe/Pd/Gd/Pd ferrimagnets</i>
AB	08	Hai Zhong - <i>Quantitative imaging of antiferromagnetic spin cycloidal textures on strain engineered BiFeO₃ thin films with a scanning nitrogen-vacancy magnetometer</i>
AB	09	Zukhra Gareeva - <i>Spin dynamics in ferrimagnets near the angular momentum compensation point</i>
AB	10	Victor Lopez Dominguez - <i>Antiferromagnetic PtMn memory devices controlled by electric current</i>
AB	11	Luis Sánchez-Tejerina - <i>Ferro-, ferri-, and antiferromagnetic materials within the same micromagnetic framework</i>
AB	12	Michał Ślęzak - <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 - <i>Straintronics for Unconventional Computing</i> (invited)
AC	02	Kerem Yunus Camsari - <i>p-bits for Quantum Inspired Algorithms</i> (invited)
AC	03	Massimiliano Di Ventra - <i>Digital Memcomputing: from logic to dynamics to topology</i> (invited)
AC	04	Julie Grollier - <i>Microwave spintronic neural networks</i> (invited)
AC	05	Eleonora Raimondo - <i>Study of the robustness of neural networks based on spintronic neurons</i>
AC	06	Alberto Riminucci - <i>Organic spintronic multilevel resistive switching devices as synapses for neuromorphic computing</i>
AC	07	Robert Menezes - <i>Vector Spin Capsule Neurons - towards a spintronic vector deep learning framework</i>
AC	08	Pietro Tullio - <i>Numerical study of noise-induced convergence of Ising machines based on spintronic oscillators</i>
AC	09	Kang L Wang - <i>Topological Transitions, Spintronics, and Quantum Computing</i> (invited)

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

AD	01	Olivier Boulle - <i>Antiferromagnetic skyrmions and skyrmion racetrack defined by light ion irradiation for skyrmions logics</i> (invited)
AD	02	Pietro Gambardella - <i>Coupled nanomagnets and domain wall logic circuits enabled by the Dzyaloshinskii-Moriya interaction</i> (invited)
AD	03	Kai Liu - <i>Chemisorption-Induced Dzyaloshinskii-Moriya Interactions and Spin Textures</i> (invited)
AD	04	Christopher Marrows - <i>Skyrmions in chiral magnetic multilayers</i> (invited)
AD	05	Oksana Chubykalo-Fesenko - <i>Ultrafast skyrmion creation by laser pulses</i>
AD	06	Emily Darwin - <i>Skyrmion hosting multilayers based on synthetic antiferromagnets</i>
AD	07	Jagannath Jena - <i>Observation of elliptical Bloch skyrmion and antiskyrmion in Mn_{1.4}Pt_{0.9}Pd_{0.1}Sn Heusler compound</i>
AD	08	Stavros Komineas - <i>Traveling skyrmions in chiral antiferromagnets</i>
AD	09	Konstantin Gusliyenko - <i>Ferromagnetic skyrmion spin-torque nano-oscillators</i>
AD	10	Daniela Mancilla Almonacid - <i>Ultrafast domain wall propagation due to the interfacial Dzyaloshinskii-Moriya interaction</i>
AD	11	Krisztian Palotas - <i>Magnetic skyrmions probed by SP-STM: topology imprinted on the charge current and spin transfer torque</i>
AD	12	Riccardo Tomasello - <i>Skyrmions stabilization in magnetic multilayers</i>
AD	13	Börge Göbel - <i>Beyond skyrmions: Alternative nano-objects for spintronics</i>

BD	01	Luis Lopez-Diaz - <i>Domain wall motion by means of magnonic currents in antiferromagnets</i>
BD	02	Peter Fischer - <i>Advanced x-ray characterization of novel topological spin textures at their fundamental length and time scales</i> (invited)
BD	03	Hans J. Hug - <i>Quantitative magnetic force microscopy – an experimental tool to develop thin film systems supporting skyrmion bobbars at room temperature</i> (invited)





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BD	04	Oleg Tretiakov - <i>Fast domain wall motion in chiral ferromagnets and ferrimagnetic insulators (invited)</i>
BD	05	Felix Buettner - <i>Fluctuation-mediated picosecond nucleation of magnetic skyrmions</i>
BD	06	Alexander Chizhik - <i>Diversity of helical magnetic structures in magnetic cylindrical microwires. Induced transitions</i>
BD	07	Mai Kameda - <i>Attractive inter-skyrmion couplings induced by distorted skyrmions</i>
BD	08	Dimitris Kechrakos - <i>Formation and electrical detection of skyrmion lattice on cylindrical nanotubes</i>
BD	09	Vadim Koronovskyy - <i>Electric field-induced displacements of the micromagnetic structural elements in ferrite garnet films</i>
BD	10	Alexander Mook - <i>Quantum damping of skyrmion crystal eigenmodes due to spontaneous quasiparticle decay</i>
BD	11	Alexander Pyatakov - <i>Bipolar electric-field induced nucleation of magnetic domains with 90-degree domain walls</i>
BD	12	Ildus Sharafullin - <i>Skyrmions and phase transitions in a ferromagnetic/ferroelectric superlattices with triangular lattice</i>
BD	13	Riccardo Tomasello - <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 - <i>Magnonic qubit computing (invited)</i>
AE	02	Olivier Klein - <i>Coherent long-range coupling between spins by chiral phonons (invited)</i>
AE	03	Denys Makarov - <i>Designing chiral magnetic responses by tailoring geometry of thin films: curvilinear ferro- and antiferromagnets (invited)</i>
AE	04	Kyongmo AN - <i>Long range coupling of magnetic bi-layers by coherent phonons</i>
AE	05	Matia Bassotti - <i>A micromagnetic study of spin-wave eigenmodes of isolated, twins and chains of Néel skyrmions</i>
AE	06	Jorrit Hortensius - <i>Coherent spin-wave transport in an antiferromagnet</i>
AE	07	Serhii M. Kukhtaruk - <i>Controlling magnons in metallic ferromagnetic nanogratings using arbitrary directions of in-plane magnetic fields</i>
AE	08	Carlos Gonzalez-Ballester - <i>Spin-Steered Magnonics</i>
AE	09	Ezio Iacocca - <i>Tailoring spin wave channels in a reconfigurable artificial spin ice</i>
AE	10	Antonio Sergio Pires - <i>Topological magnons in the antiferromagnetic checkerboard lattice</i>
AE	11	Isabella Rahel Boventer - <i>Reconfigurable magnonic crystal based on multiferroic-ferromagnetic heterostructures</i>
AE	12	Alexey B. Ustinov - <i>Nonlinear spin-wave logic gates based on magnetic films</i>

BE	01	Axel Hoffmann - <i>Hybridized Magnons in Thin Film Systems (invited)</i>
BE	02	Daniela Petti - <i>Nanoscale engineered spin textures for magnonics (invited)</i>
BE	03	Vittorio Basso - <i>Electric field effect on spin waves spin currents</i>





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BE	04	Sebastian Alejandro Diaz - <i>Chiral hinge magnons in second-order topological magnon insulators</i>
BE	05	Tomoki Hiroswawa - <i>Magnonic quadrupole topological insulator in antiskyrmion crystals</i>
BE	06	Mateusz Gołębiewski - <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 - <i>Application of magnonic crystals in magnetic particle detection</i>
BE	08	Shin Miyahara - <i>Anomalous spin wave excitation in helical magnets</i>
BE	09	Christina Psaroudaki - <i>Spin Wave Radiation by a Topological Charge Dipole</i>
BE	10	Davi Röhe Rodrigues - <i>Exotic spinwave effects in topological magnetic textures</i>
BE	11	Alexey B. Ustinov - <i>Effect of vanadium dioxide film on the magnonic crystal band-gaps</i>
BE	12	Alexis Wartelle - <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	Zhihong Chen - <i>2D Valley-Spin Transport in Transition Metal Dichalcogenides (invited)</i>
AF	02	Gisela Schütz - <i>Magnetic parameters in reduced dimensions (invited)</i>
AF	03	Vittorio Basso - <i>The magnon mean scattering time of YIG derived from spin Seebeck effect experiments</i>
AF	04	Irina Bobkova - <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 - <i>Magnetization and magnetoresistance of Ni/porous-GaN composites</i>
AF	06	Tatiana Gavrilova - <i>Structural, magnetic and electrochemical properties of Li₃V₂(PO₄)₃/Li₃PO₄ composite as a potential cathode material in lithium-ion batteries</i>
AF	07	Liudmila Iosifovna Kveglis - <i>Formation of magnetic aluminum carbide Al₄C₃ by sintering Al₂O₃+MgO powders by SPS method</i>
AF	08	Tomáš Maleček - <i>Influence of static and dynamic epitaxial strain on La₂/3Sr₁/3MnO₃ ultrathin films</i>
AF	09	Kamil Nowak - <i>Influence of introduction small amounts of metallic dopants on topological surface states of Bi₂Se₃ topological insulator</i>
AF	10	Philipp Ritzinger - <i>Anisotropic magnetoresistance in systems with non-collinear magnetic order</i>
AF	11	Silvia Tacchi - <i>Tailoring magnetic properties of Pt/Co multilayers by helium ion irradiation</i>
AF	12	Roman Yaroslavtsev - <i>Co-Ni coatings synthesized using arabinogalactan</i>

BF	01	Christos Panagopoulos - <i>Non-collinear magnetism on proximate superconductors (invited)</i>
BF	02	Shyam Babu - <i>Magnetic-field-induced incommensurate to collinear spin order transition in NiBr₂</i>
BF	03	Karel Carva - <i>Complex interplay of magnetism and structure in 2D van der Waals halide VI₃</i>
BF	04	Elena A Denisova - <i>Magnetic properties of 3-d metal rods with gradients of composition produced by electroless deposition</i>
BF	05	Sabina Emelyanova - <i>Low temperature Hall effect in Ni-Mn-Sb-based magnetocaloric alloys doping by aluminum</i>





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BF	06	Hubert Głowiński - <i>The correlation between orbital magnetic moments and effective magnetic anisotropy in Au/CoFeB/Au systems</i>
BF	07	Maria Angeles Laguna-Marco - <i>On the magnetism of novel Ir_{1-x}Cr_xO₂ thin films</i>
BF	08	Piotr Mazalski - <i>Strong interfacial Dzyaloshinskii-Moriya interaction and magnetic anisotropy in NiO/Co/Pt trilayers</i>
BF	09	Cinthia Piamonteze - <i>Tuning magnetic and electronic properties of NdNiO₃ by a proximity layer</i>
BF	10	Aleksei Valerevich Shestakov - <i>Temperature features of magnetic resonance of Mn_{0.13}Hg_{0.87}Te</i>
BF	11	Oleg Udalov - <i>Manipulation of Dzyaloshinskii-Moriya interaction in Co/Pt multilayers with strain</i>
BF	12	Anna Zakharova - <i>Interplay between magnetism and interface-induced effects in ultra-thin manganites</i>

CF	01	Javad Shabani - <i>Progress in realizing topological superconductivity in planar Josephson junctions (invited)</i>
CF	02	Daniel E. Buergler - <i>Towards molecular hybrid spintronic devices: Novel ferrocene- and pyrene- based cyclophane chemisorbed on ferromagnetic Co(111) nanoislands</i>
CF	03	Anna Maria Cucolo - <i>Room-Temperature Ferromagnetism in Oxidized-Graphenic Nanoplatelets</i>
CF	04	Ilya Eremin - <i>Magnetic skyrmionic textures in proximity to a superconductor: vortex-skyrmion interaction and Meissner currents</i>
CF	05	Vladimir A Fel'k - <i>New features in a field behavior of magnetic correlations in ferromagnet with random magnetic anisotropy</i>
CF	06	Pushpendra Gupta - <i>Simultaneous observation of anti-damping and inverse spin Hall effect in La_{0.67}Sr_{0.33}MnO₃/Pt bilayers system</i>
CF	07	Dominik Legut - <i>Lattice vibrations and trimeron order of the Verwey transition in magnetite</i>
CF	08	Julián Milano - <i>Magnetoresistance in thin films presenting stripe domains</i>
CF	09	Chang-Youn Moon - <i>Strong enhancement of magnetic order from bulk to stretched monolayer FeSe: a DFT+DMFT study</i>
CF	10	Christian Rinaldi - <i>Room-temperature and non-volatile electric control of spin currents generation in the ferroelectric semiconductor GeTe</i>
CF	11	Irina Vazhenina - <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. Static and dynamic spin Hall and spin orbital torques

AG	01	Johan Åkerman - <i>Microwave signal generation and neuromorphic computing using large spin Hall nano-oscillator arrays (invited)</i>
AG	02	Andy Kent - <i>Spin-transfer switching and magnetic interactions in perpendicular magnetic tunnel junctions nanopillars (invited)</i>
AG	03	Silvia Picozzi - <i>Spin-orbit coupling: an endless source of complex magnetism (invited)</i>
AG	04	Lucian Prejbeanu - <i>MRAM adoption in microelectronics: status and perspectives (invited)</i>





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AG	05	Andrei Slavin - <i>Tuneable receiver of sub-THz signals based on an antiferromagnet</i> (invited)
AG	06	Hyunsoo Yang - <i>Spin-orbit torque of topological spin textures and magnons</i> (invited)
AG	07	Weisheng ZHAO - <i>From Spin Transfer Torque (STT) to Toggle Spin Torque (TST) for the next generation of MRAM</i> (invited)
AG	08	Massimiliano d'Aquino - <i>Chaotic dynamics and thermal switching in ac-driven nanomagnets</i>
AG	09	Roberto de Orio - <i>Deterministic spin-orbit switching scheme for an array of perpendicular MRAM cells suitable for large scale integration</i>
AG	10	Gleb Dmitrievich Demin - <i>The concept of a spintronic memristor based on a system of interconnected spin-orbit magnetic heterostructures with a controlled number of intermediate resistive states</i>
AG	11	Esteban José Garzón - <i>Dual-Barrier MTJ Based Cryogenic STT-MRAMs</i>
AG	12	Andrea Grimaldi - <i>Probabilistic computing solver applied to MAX-SAT instances</i>
AG	13	Luciano Mazza - <i>Spin-torque diodes for computing multiplication</i>
AG	14	Brindaban Ojha - <i>Driving skyrmions with low threshold current density in amorphous CoFeB thin film</i>
AG	15	Gaspere Varvaro - <i>SAF-based perpendicularly magnetized GMR spin valves on large-area flexible substrates</i>

AH: Micromagnetic modeling and hysteresis

AH	01	Patrizio Ansalone - <i>Magnetization transport and local exchange invariance</i>
AH	02	Antonio Faba - <i>Ring Cores of Soft Ferrite in Power Electronics: a Macro-Magnetic Approach to the Modelling in Time Domain</i>
AH	03	Antonio Faba - <i>Hysteresis modelling in additively manufactured FeSi magnetic cores</i>
AH	04	Aleksey Aleksandrovich Gavriluk - <i>Dynamic particular properties of hysteresis loops of rapidly quenched plastically deformed transition metals based wires</i>
AH	05	Simone Quondam Antonio - <i>Deep neural networks for the efficient computation of hysteresis processes in GO Fe-Si steel sheets under generic supply excitations</i>
AH	06	Elena Semenova - <i>Switching rate computation in full-scale micromagnetic simulations</i>
AH	07	Raffaele Silvani - <i>Micromagnetic study of the effect of the interfacial Dzyaloshinskii-Moriya interaction on the band structure of one-dimensional magnonic crystals</i>
AH	08	Vitalii V. Vitko - <i>Investigation of microwave bistability in spin-wave active ring resonator</i>

AI: Spin injection and spin-dependent tunneling

AI	01	Yukio Nozaki - <i>Spin current generation using vorticity in solids</i> (invited)
AI	02	J.-Carlos ROJAS-SANCHEZ - <i>Giant self-production of spin current and self-spin-orbit torque in ferrimagnetic materials</i> (invited)
AI	03	Guoqiang Yu - <i>Current-driven magnetization switching in a van der Waals material-based spintronic device</i> (invited)
AI	04	Cecile Grezes - <i>Unidirectional spin-Hall magnetoresistance in HgTe topological insulator - ferromagnet heterostructures</i>
AI	05	Cecile Grezes - <i>Non-volatile electric-field control of spin-orbit torques in perpendicular ferromagnet - SrTiO3 system</i>





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AI	06	Jean Anne Incorvia - <i>Transport in Scandium Nitride Magnetic Tunnel Junctions Using First Principles</i>
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LIVE: Session Lecture

LIVE	01	ALBERT FERT - <i>From topology to devices</i> (Nobel Lecture)
LIVE	02	Mathias Kläui - <i>Antiferromagnetic Insulatronics: Spintronics without magnetic fields and moving electrons</i> (Distinguished Lecture)

BA: Interdisciplinary talks

BA	01	Montserrat Rivas - <i>A new generation of rapid diagnostic tests: the role of magnetic nanoparticles</i> (invited)
BA	02	Stephan Roche - <i>Towards van der Waals Heterostructures-based Spintronics</i> (invited)
BA	03	Nicola Spaldin - <i>Hidden, entangled and resonating order</i> (invited)
BA	04	Mikhail Agrachev - <i>Magnetic Ordering in Gold Nanoclusters</i>
BA	05	Subhankar Bedanta - <i>Spinterface with fullerene</i>
BA	06	Arezki Benfdila - <i>Magnetic Sensitivity Modeling of DGMOSFET Transistor</i>
BA	07	Riccardo Bertacco - <i>TMek: a quantitative lab-on-chip rapid diagnostic test for malaria</i>
BA	08	Fabio Corti - <i>Inductor SPICE model including non-linearity due to non-uniform magnetic field</i>
BA	09	Luca Nesi - <i>Graphene-based ultrathin magnetic membranes for spin polarimetry</i>
BA	10	Tianxiao Nie - <i>Terahertz generation and modulation in topological insulator</i>
BA	11	Paola Maria Tiberto - <i>Modelling of heating efficiency in magnetic hyperthermia: effect of non-harmonic driving field</i>
BA	12	Paola Maria Tiberto - <i>FePd nanoparticles by solid-state dewetting for magnetic hyperthermia</i>
BA	13	Paweł Mazurek - <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>

