

70th Annual Conference on Magnetism and Magnetic Materials

October 27-31, 2025
www.magnetism.org



MMM2025

Palm Beach, Florida
PALM BEACH CONVENTION CENTER

PROGRAM BOOK

As of October 27, 2025

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and the IEEE Magnetics Society*



SCOPE OF THE CONFERENCE



The 70th Annual Conference on Magnetism and Magnetic Materials (MMM 2025) is sponsored jointly by AIP Publishing and the IEEE Magnetics Society. Members of the international scientific and engineering communities interested in recent developments in fundamental and applied magnetism are invited to attend and contribute to the technical sessions. The technical program will include invited and contributed papers in oral and poster sessions, invited symposia, a tutorial, plenary, and several special sessions. This Conference provides an outstanding opportunity for worldwide participants to meet, share their research, and to discuss and learn about the most recent developments in all areas of magnetism research.

CONFERENCE INFORMATION

LOCATION: [Palm Beach County Convention Center](#)

HOTELS: [Hilton West Palm Beach](#) and [West Palm Beach Marriott](#)

MOBILE APP:

The **MyItinerary by ScholarOne** mobile app and online desktop planner provide attendees with instant access to the entire Conference program including abstracts, speakers, and the schedule of events. You can also use it to build your own customized schedule and to get in touch with other attendees. Download the free app before you arrive!

CONFERENCE MATERIALS:

- [Program Overview](#)
- [Symposia and Invited Speakers](#)
- Program Book: [Desktop Optimized](#) / [Mobile Optimized](#)
- Abstracts Book will be posted once available.
- [Special Events & Sessions](#)



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PROGRAM COMMITTEE

(Name in blue indicates Team Lead)

Category	Name	Institution
I. Fundamental Properties and Cooperative Phenomena	Paulo Eduardo de Faria Junior	University of Central Florida, USA
	Denis Candido	University of Iowa, USA
	Roland Kawakami	Ohio State University, USA
II. Magnetoelectronic Materials and Phenomena	Sajid Husain	University of California, Berkeley, USA
	Amr Abdelsamie	Laboratory Albert Fert, CNRS, France
	Christian Tzschaschel	University of Zurich, Switzerland
III. Spintronics - Fundamentals and Devices	Dario Arena	University of South Florida, USA
	Simranjeet Singh	Carnegie Mellon University, USA
	Javier Villegas	CNRS, France
	Saroj Dash	Chalmers University of Technology, Sweden
	Alex Jenkins	International Iberian Nanotechnology Laboratory, Portugal
	Paul Keatley	University of Exeter, United Kingdom
	Luqiao Liu	Massachusetts Institute of Technology, USA
	Susmita Saha	Ashoka University, India
	Guoqiang Yu	Chinese Academy of Sciences, China
IV. Magnetization Dynamics and Micromagnetics	Enrique Cobas	US Naval Research Laboratory, USA
	Anjan Soumyanarayanan	National University of Singapore, Singapore
	Philipp Pirro	RPTU Kaiserslautern-Landau, Germany
	Mark Stiles	National Institute of Standards and Technology (NIST), USA
	Olaf van 't Erve	US Naval Research Laboratory (NRL), USA
	Wei Zhang	UNC Chapel Hill, USA
V. Magnetic Recording, Storage and Computing	Stephanie Hernandez	Seagate, USA
	Byong-Guk Park	KAIST, Korea
	Damien Querlioz	Univ Paris-Saclay, CNRS, France
	Flavio Abreu Araujo	Université Catholique de Louvain, Belgium
	Jayasimha Atulasimha	Virginia Commonwealth University, USA
	Tobias Maletzky	Headway Technologies, USA
	Niranjan Natekar	Western Digital, USA
	Chi-Feng Pai	National Taiwan University, Taiwan
	Chris Safranski	IBM, USA
VI. Soft Magnetic Materials	Piotr Kulik	University of Central Florida, USA
	Chins Chinnasamy	ORNL, USA
	Sara Mills	NRL, USA
VII. Hard Magnetic Materials	Yukiko Takahashi	NIMS, Japan
	Perumal Alagarsamy	Indian Institute of Technology, India
	Pelin Tozman	Technische Universität Darmstadt, Germany

Category	Name	Institution
VIII. Structured Materials	Jamileh Beik Mohammadi	University of Alabama, USA
	Arantxa Fraile Rodriguez	University of Barcelona, Spain
	Anish Rai	Western Digital, USA
IX. Multi-Functional Magnetic Materials and Applications	Ssu-Yen Huang	National Taiwan University, Taiwan
	Xin Fan	University of Denver, USA
	Tino Gottschall	Dresden High Magnetic Field Laboratory, Germany
X. Sensors, High Frequency Devices, and Power Devices	Tianxiang Nan	Tsinghua University, China
	Jianhua Liu	Chinese Academy of Science, China
	Masahiro Yamaguchi	Tohoku University, Japan
XI. Interdisciplinary and Emerging Topics	Ravi Hadimani	Virginia Commonwealth University, USA
	Shawn Pollard	University of Memphis, USA
	John Fullerton	Argonne National Laboratory, USA
	Alejandro Gómez Roca	ICN2, Barcelona, Spain
	Michael Vogel	University of Kiel, Germany
	Kai Wu	Texas Tech University, USA
XII. Magnetic Characterization	Shawn Pollard	University of Memphis, USA
	John Fullerton	Argonne National Laboratory, USA
	Michael Vogel	University of Kiel, Germany

SESSION CHAIRS

Session		First Name	Last Name	Institution
AA	Spin-optoelectronics Towards Real World Applications	Yuan	Lu	Institut Jean Lamour
AB	Quantum Sensing of Novel Magnetism	Gregory D.	Fuchs	Cornell University
AC	Skyrmions and Magnetic Textures Related Phenomena	Chung-Tao	Chou	Massachusetts Institute of Technology
AD	Magnetoelectric and Multiferroics I	Paul	Stevenson	Northeastern University
		Yayoi	Takamura	University of California, Davis
AE	New Applications and Other Emerging Topics I	Shawn	Pollard	The University of Memphis
AF	Spin-orbit Torque and Related Phenomena	Raghvendra	Posti	Carnegie Mellon University
AG	Electronic Structure and Magnetic Excitations	Christianne	Beekman	Florida State University
AP	Biomagnetism and Biomedical Applications I	Javier	Alonso Masa	University of Cantabria
AQ	Instrumentation and Measurement Techniques	Kazi Zahirul	Islam	The University of Memphis
AR	Magnetization Dynamics	Amir	Capua	The Hebrew University of Jerusalem
BA	Recent Advances and Future Challenges with Non-Collinear Antiferromagnets	Satoru	Nakatsuji	University of Tokyo
BB	Biomagnetic Sensors: From Bench to Bedside	Ravi	Hadimani	Virginia Commonwealth University
BC	Thermoelectric, Magnetic, and Superconducting Effects in Hybrid Heterostructures and Spin Textures	Yingying	Wu	University of Florida
BD	Soft Magnetic Materials I	Chins	Chinnasamy	Oak Ridge National Laboratory
		Piotr	Kulik	University of Central Florida
BE	Magneto-Optic and Magneto-Caloric Materials and Devices	Anis	Biswas	Ames National Laboratory
		Mahmud	Khan	Miami University
BF	STT-MRAM and SOT-MRAM and Related Devices	Dong-Jun	Kim	KAIST
BG	Hard Magnetic Materials I: Sm-based and Rare Earth Free Magnets	Harshida	Parmar	Ames National Laboratory
BP	Magnonics I: Spin Waves & Spin Dynamics	Jing	Zhou	Institute of Materials Research and Engineering, A*STAR
BQ	Transformers and Power Electronics I	Hiroaki	Matsumori	Nagoya Institute of Technology
BR	Energy Assisted Magnetic Recording & Magnetic Sensors	Takahide	Kubota	Tohoku University
		Niranjan	Natekar	Western Digital

Session		First Name	Last Name	Institution
CA	Beyond Polycrystalline Films: Textured Materials for High-Performance Spintronic Devices	Pedram	Khalili Amiri	Northwestern University
CB	Future Read Head Technologies	Stephanie	Hernandez	Seagate Technology
CC	Magneto-transport and Magneto-optics of Higher Orders in Magnetization	Timo	Kuschel	Bielefeld University
CD	Magnetoelectric and Multiferroics II	Sajid	Husain	University of California, Berkeley
CE	Altermagnetism & Antiferromagnetism - Thin Films and Other Systems	Rahul	Gupta	University of Gothenburg
CF	Low-Dimensional Systems, Molecular and Organic Magnets	Jacob	Hanson-Flores	University of Central Florida
CG	Magnetic Microscopy and Imaging	John	Fullerton	Argonne National Laboratory
CH	Fast and Efficient Switching	Xin	Fan	University of Denver
		Satoshi	Sugimoto	NIMS
CQ	Biomagnetism and Biomedical Applications II	Dario	Arena	University of South Florida
		Prashant	Kumar	IMS RIKEN Center for Integrative Medical Sciences
CR	Soft Magnetic Materials II	Natheer	Alatawneh	Sacred Heart University
DA	Perspective of Probabilistic Computing with Magnetic Tunnel Junctions	Giovanni	Finocchio	University of Messina
DB	Advancing Magnonics: Unlocking the Potential of the Third Dimension	Gianluca	Gubbiotti	IOM-CNR
DC	Nanoparticles, 3D, and Other Structured Materials	Michalis	Charilaou	University of Louisiana at Lafayette
DD	Nd ₂ Fe ₁₄ B and Measurement Techniques	Yusuke	Hirayama	National Institute of Advanced Industrial Science and Technology (AIST)
		Abdellah	Lisfi	Morgan State University
DE	Magnetic Ground States, Phase Transitions and Magneto-Elastic Phenomena	Hang	Chi	University of Ottawa
		Nicholas	Jones	Naval Surface Warfare Center, Carderock Division
DF	Spin Injection, Pumping and Transfer Torques	Danru	Qu	National Taiwan University
DG	Magnetic Sensors, High Frequency Devices, and Power Electronics I	Natheer	Alatawneh	Sacred Heart University
		Noah	Schulz	Naval Surface Warfare Center, Panama City Division
DQ	Magneto-Caloric, Magnetoelectric, and Multiferroic Materials and Devices	Karthik	Srinivasan	Boise State University

Session		First Name	Last Name	Institution
DR	Magnetoresistance, Spin Torque, and Spin Injection in Heterostructures and Films	Avinash Kumar	Chaurasiya	University of Gothenburg
		Guoqiang	Yu	Chinese Academy of Sciences
		Dong-Jun	Kim	KAIST
EA	Compact EUV Sources: Exceptional New Tools for Ultrafast Spin Dynamics	Dario	Arena	University of South Florida
EB	Altermagnetic Materials	Qihang	Liu	Southern University of Science and Technology
EC	Modeling and Machine Learning	Frank	Abel	United States Naval Academy
ED	Spin-charge Interconversion and Magnetotransport	Marcos	Guimaraes	University of Groningen
		Selma	Amara	King Abdullah University of Science and Technology
EE	Magnonics II: Crystals & Devices	Riccardo	Hertel	Centre National de la Recherche Scientifique
EF	Spin and Magnetism in van der Waals Layered Materials	Paulo Eduardo	de Faria Junior	University of Central Florida
EG	Advanced Magnetic Recording Technologies	Aneesh	Venugopal	Seagate Technology
EP	Spin and Orbital Dynamics	Gyung-Min	Choi	Sungkyunkwan University College of Natural Science
EQ	Transformers and Power Electronics II	Chins	Chinnasamy	Oak Ridge National Laboratory
		Piotr	Kulik	University of Central Florida
ER	Hard Magnetic Materials II	Shusuke	Okada	National Institute of Advanced Industrial Science and Technology (AIST)
FA	All-Orbitronic Concepts and Devices	Akash	Kumar	University of Gothenburg
FB	Coherent X-ray for Probing the Interplay of Heterogeneity and Spin-electronic Correlations	Sujoy	Roy	Lawrence Berkeley National Laboratory
FC	Biomagnetism and Biomedical Applications III	Jenifer	Gomez-Pastora	Texas Tech University
		Ravi	Hadimani	Virginia Commonwealth University
FD	Low Damping and Topological Systems	Ayomipo	Ojo	University of South Florida
		Eklavya	Thareja	University of South Florida
FE	Magnetism and Spintronics: Low-dimensional Systems	Yunqiu Kelly	Luo	University of Southern California
FF	Unconventional Computing	Philippe	Talatchian	SPINTEC
FG	Thin Film and Interfaces	Paola	Tiberto	INRIM
FP	Shielding and Levitation / Structured Materials, Nanoparticles, and Nanocomposites	Sung-Min	Ahn	POSTECH

Session		First Name	Last Name	Institution
FQ	Antiferromagnets, Ferrimagnets & Ultrafast Spin Dynamics	Sudip	Majumder	University of South Florida
FR	Skyrmions and Spin-orbit Torque	Biplab	Sanyal	Uppsala University
GA	Unconventional and Nonreciprocal Superconductivity	Denys	Makarov	Helmholtz-Zentrum Dresden-Rossendorf
GB	Probing and Manipulating Magnetic Order in 2D Systems	Simranjeet	Singh	Carnegie Mellon University
GC	Quantum Materials and Cooperative States	Juan	Sierra	Catalan Institute of Nanoscience and Nanotechnology (ICN2)
GD	Magnetoelectric and Multiferroics III	Sajid	Husain	University of California, Berkeley
GE	Magnonics III: Materials & Spin Texture Dynamics	Benjamin	Jungfleisch	University of Delaware
GF	Alter- / Anti-ferromagnetism in RuO ₂ and Other Materials	Oliver	Amin	University of Nottingham
GG	Magnetoresistance in Heterostructures (GMR, TMR, TAMR)	Hai	Li	Analog Devices
		Yabin	Fan	Western Digital
		Guoqiang	Yu	Chinese Academy of Sciences
GP	Antiferromagnets and 2D Materials	Zhe	Yuan	Fudan University
GQ	Multi-Functional Magnetic Materials and Other Emerging Topics	Hanu	Arava	Argonne National Laboratory
		Yingying	Wu	University of Florida
GR	Fundamental Properties and Cooperative Phenomena	Debajit	Chakraborty	University of Nebraska
		Rajesh	Chopdekar	Western Digital
VP1	Computational Methods	Riccardo	Hertel	Centre National de la Recherche Scientifique
VP2	Fundamental Properties and Cooperative Phenomena	Yingying	Wu	University of Florida
VP3	Hard Magnets and Functional Magnetic Materials	Tino	Gottschall	Dresden High Magnetic Field Laboratory
VP4	Magnetic Sensors, High Frequency Devices, and Power Electronics II	Saijian	Ajia	Tohoku University
		Karthik	Srinivasan	Boise State University
VP5	New Applications and Other Emerging Topics II	K	Sriram	IIT Guwahatti
VP6	Soft Magnetic Materials III	Daniel	Hedlund	University of Central Florida
		Sara	Mills	US Naval Research Laboratory
VP7	Spintronic Materials and Devices	Sajid	Husain	University of California, Berkeley

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Term expiring February 2028

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FUTURE CONFERENCES

[2026 Intermag Conference](#)

April 13 - 17, 2026, Manchester, UK

71st Annual Conference on Magnetism and Magnetic Materials

November 2 - 6, 2026, Honolulu, HI

2027 Intermag Conference

May 10 - 14, 2027, Jeju Island, South Korea

23rd International Conference on Magnetism (ICM)

June 14 - 18, 2027, San Juan, Puerto Rico

70th
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on Magnetism and
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MMM2025

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TU: TUTORIAL: 2D MAGNETS – FUNDAMENTALS AND EMERGING FRONTIERS

Chair(s): A. Manchon, *Aix-Marseille University, Marseille, France*

Monday, October 27, 2025

02:30 PM-05:00 PM

Grand Ballroom

02:30 PM-02:35 PM

Welcome and Introduction

02:35 PM-03:20 PM

TU-01. 2D Magnetic Heterostructures – Skyrmions and Their Applications

Y. Wu

Electrical and Computer Engineering, University of Florida, Gainesville, Florida, United States

03:20 PM-04:05 PM

TU-02. 2D van der Waals Magnets: From Fundamental Physics to Applications

J. Park

Seoul National University, Seoul, Korea (the Republic of)

04:05 PM-04:05 PM

TU-03. Epitaxial Growth, Spin-Orbit Torque, and Magnetization Dynamics in 2D Magnets

R. Kawakami

Department of Physics, The Ohio State University, Columbus, Ohio, United States

WELCOME RECEPTION

Monday, October 27, 2025

05:00 PM-06:30 PM

Convention Center Courtyard

SESSION AA: SPIN-OPTOELECTRONICS TOWARDS REAL WORLD APPLICATIONS

Chair(s): Y. Lu, *Institut Jean Lamour, Nancy, France*

Tuesday, October 28, 2025

08:30 AM-12:00 PM

Grand Ballroom

08:30 AM-09:06 AM

AA-01. Controlling the helicity of light by electrical magnetization switching in Spin Light Emitting Diodes

P. Renucci^{1,7}, A. Dainone², N. Figueiredo-Prestes³, M. Morassi⁴, X. Devaux², M. Lindemann⁵, J. George³, H. Jaffrès³, A. Lemaitre⁴, B. Xu^{6,7}, M. Stoffel², L. Lombez¹, D. Lagarde¹, G. Cong¹⁰, T. Ma¹¹, M. Vergnat², X. Marie¹, X. Han⁸, S. Mangin², J. Rojas-Sanchez², J. Wang⁹, M. C. Beard¹², N. Gerhardt⁵, I. Zutic¹³, Y. Lu²

¹Université de Toulouse, INSA-CNRS-UPS, LPCNO, Toulouse, France, ²Institut Jean Lamour, Université de Lorraine, CNRS, UMR 7198, Nancy, Nancy, France, ³Laboratoire Albert Fert, CNRS, Thales, Université Paris-Saclay, Palaiseau, France, ⁴Université Paris-Saclay, CNRS, Centre de Nanosciences et de Nanotechnologies, Palaiseau, France, ⁵Photonics and Terahertz Technology, Ruhr-Universität Bochum, Bochum, France, ⁶Key Laboratory of Semiconductor Materials Science, Institute of Semiconductors, Chinese Academy of Sciences, Beijing, China, ⁷College of Materials Science and Opto-Electronic Technology, University of Chinese Academy of Sciences, Beijing, China, ⁸Beijing National Laboratory for Condensed Matter Physics, Institute of Physics, University of Chinese Academy of Sciences, Chinese Academy of Sciences, Beijing, China, ⁹Department of Electrical and Computer Engineering, University of Minnesota, Minneapolis, Minnesota, United States, ¹⁰Platform Photonics Research Center, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan, ¹¹Beijing National Laboratory for Condensed Matter Physics, Institute of Physics, University of Chinese

Academy of Sciences, Chinese Academy of Sciences, Beijing, China, ¹²Chemistry and Nanoscience Center, National Renewable Energy Laboratory, Golden, Colorado, United States, ¹³Department of Physics, University at Buffalo, State University of New York, Buffalo, New York, New York, United States

09:06 AM-09:42 AM

AA-02. Efficient generation of spin-polarized light emission with 2D magnetic heterostructure

X. Zhang

Physics, University of Florida, Gainesville, Florida, United States

09:42 AM-10:18 AM

AA-03. Room-temperature spin-optoelectronics based on defect-enabled spin amplification

S. Hiura

Hokkaido University, Sapporo, Japan

10:18 AM-10:45 AM

Break

10:45 AM-11:21 AM

AA-05. Recent Progress in Understanding Polarization Modulation in Spin Lasers

N. Yokota

Research Institute of Electronics, Shizuoka University, Hamamatsu, Shizuoka, Japan

11:21 AM-11:57 AM

Panel Discussion

SESSION AB: QUANTUM SENSING OF NOVEL MAGNETISM

Chair(s): G. Fuchs, *Cornell University, Ithaca, New York, United States*

Tuesday, October 28, 2025

08:30 AM-12:00 PM

Ballroom A

08:30 AM-09:06 AM

AB-01. Imaging and Control of 2D Magnets Revealed by Quantum Sensors

B. Zhou

Physics, Boston College, Chestnut Hill, Massachusetts, United States

09:06 AM-09:42 AM

AB-02. Quantum Sensing with Single Spin Defects in 2D and 1D Materials

T. Li

Purdue University, West Lafayette, Indiana, United States

09:42 AM-10:18 AM

AB-03. Quantum Sensing of Nonlinear Magnonic Dynamics

L. Liu, Z. Hu, Q. Wang

MIT, Cambridge, Massachusetts, United States

10:18 AM-10:45 AM

Break

10:45 AM-11:21 AM

AB-04. Quantum Sensing with Spin Defects: From Spin-Wave Spectroscopy to Symmetry Detection

B. Flebus

Boston College, Chestnut Hill, Massachusetts, United States

11:21 AM-11:57 AM

Panel Discussion

SESSION AC: SKYRMIONS AND MAGNETIC TEXTURES RELATED PHENOMENA

Chair(s): C. Chou, *Physics, Massachusetts Institute of Technology, Cambridge, Massachusetts, United States*

Tuesday, October 28, 2025

08:30 AM-12:00 PM

Ballroom C

08:30 AM-08:42 AM

AC-02. Controlled Formation of Skyrmion Bags

L. Kern

Department of Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts, United States

08:42 AM-08:54 AM

AC-03. Stabilization of Non-collinear Magnetic Textures in Epitaxial Fe₃GeTe₂/Bi₂Te₃ Heterostructures from Interfacial Strain and Dzyaloshinskii–Moriya Interaction

D. Le¹, E. Thareja¹, Y. K. Luo², M. Phan¹, J. D. Gayles¹

¹*Department of Physics, University of South Florida, Tampa, Florida, United States*, ²*Department of Physics and Astronomy, University of Southern California, Tampa, California, United States*

08:54 AM-09:06 AM

AC-04. Efficient Manipulation of Topological Objects in B20 Multilayer Structures

G. M. Pantano, E. Thareja, D. Le, J. D. Gayles

Department of Physics, University of South Florida, Tampa, Florida, United States

09:06 AM-09:18 AM

AC-05. Tunable magnetic skyrmions in self-formed 3D wrinkles in freestanding membranes *

Z. Yin^{1,2*}, K. Gu¹, P. Wang¹, H. Meyerheim¹, T. Jiang¹, A. Srivastava¹, S. Parkin^{1,2}

¹*NISE, Max Planck Institute of Microstructure Physics, Halle, Germany*, ²*Department of Physics, Martin-Luther-Universität Halle-Wittenberg, Halle, Germany*

09:18 AM-09:30 AM

AC-07. Interlayer Dzyaloshinskii – Moriya interactions in epitaxial Co/Ir/Co/Pt multilayers

A. Koziol Rachwał, E. Oles, P. Drozd, A. Kwiatkowski, M. Slezak, T. Slezak

AGH University of Krakow, Krakow, Poland

09:30 AM-09:42 AM

AC-08. *Ab-initio* Study of the Topological Hall Effect Caused by Magnetic Skyrmions in Pd/Fe/Ir(111)

A. Kosma¹, P. Rüßmann^{1,5}, Y. Mokrousov^{1,2}, S. Blügel^{1,3}, P. Mavropoulos⁴

¹*Peter Grünberg Institut, Forschungszentrum Jülich and JARA, Juelich, Germany*, ²*Institute of Physics, Johannes Gutenberg-University Mainz, Mainz, Germany*, ³*Physics Department, RWTH-Aachen University, Aachen, Germany*, ⁴*Department of Physics, National and Kapodistrian University of Athens, Athens, Greece*, ⁵*Institute for Theoretical Physics and Astrophysics, University of Würzburg, Würzburg, Germany*

09:42 AM-09:54 AM

AC-09. Control on the motion of magnetic skyrmions by the interfacial improvement

H. Koizumi¹, W. Zeng², H. Ma², R. Ishikawa³, Y. Suzuki⁴, A. Hirohata^{1,5}

¹Center for Science and Innovation in Spintronics, Tohoku University, Sendai, Japan, ²College of Engineering, City University of Hong Kong, Hong Kong, Hong Kong, ³ULVAC, Osaka, Japan, ⁴Osaka University, Osaka, Japan, ⁵Max Planck Institute for Chemical Physics of Solids, Dresden, Germany

09:54 AM-10:06 AM

AC-11. Voltage-Controlled Magnetic Anisotropy Effects in Skyrmionic Magnetic Tunnel Junctions

A. Kumar¹, S. Chen², A. Chaturvedi¹, B. Xie¹, J. Lourembam², A. Soumyanarayanan^{1,2}, J. Zhou²

¹Physics, National University of Singapore, Singapore, Singapore, ²Institute of Materials Research & Engineering (IMRE), Agency for Science, Technology and Research (A*STAR), Singapore, Singapore

10:06 AM-10:18 AM

AC-12. A study on room temperature ferromagnetic Fe₃GaTe₂

R. Jain¹, L. Tsai¹, N. Hai¹, H. Chang¹, R. Sankar¹, Y. Liou², Y. Chen², J. Liang³, S. Lee¹

¹Institute of Physics, Academia Sinica Taiwan, Taipei, Nangang, Taiwan, ²Department of Physics, National Cheng Kung University, Tainan, Taiwan, ³Department of Physics, Fu-Jen Catholic University, Taipei, Taiwan

10:18 AM-10:30 AM

AC-13. Effect of the Dzyaloshinskii-Moriya interaction on the energy dispersion of spin spirals

D. Huang, A. Manchon

Aix-Marseille Université, CNRS, CINaM, Marseille, France

SESSION AD: MAGNETOELECTRIC AND MULTIFERROICS I

Co-Chair(s): P. Stevenson, *Physics, Northeastern University, Boston, Massachusetts, United States* and Y. Takamura, *Materials Science and Engineering, University of California, Davis, Davis, California, United States*

Tuesday, October 28, 2025

08:30 AM-12:00 PM

Ballroom B

08:30 AM-09:06 AM

AD-01. Colossal enhancement of spin transmission through magnon confinement in an antiferromagnet

S. Husain

Department of Materials Science and Engineering, University of California Berkeley, Berkeley, California, United States

09:06 AM-09:18 AM

AD-03. Multiphysics and Multiscale FEM Modeling of Ni-LNO-Ni Magnetoelectric Composites with Self-Bias Behavior

D. Bidouba-Sanvany^{1,2}, T. Huang^{1,2}, A. Gensbittel^{1,2}, Y. Zheng³, E. Dandeu³, H. Talleb^{1,2}, M. Marangolo³

¹Sorbonne Université, CNRS, Laboratoire de Génie Electrique et Electronique de Paris, Paris, France, ²Université Paris-Saclay, Centrale Supélec, CNRS, Laboratoire de Génie Electrique et Electronique de Paris, Paris, France, ³Sorbonne Université, CNRS, Institut des NanoSciences de Paris, INSP, UMR7588, Paris, France

09:18 AM-09:30 AM

AD-04. Achieving Large and Tunable VCMA in CoFeB/MgO through Electron Depletion with Work-Function-Engineered PtxW1-x Underlayer

Y. Chen¹, T. Peterson², Q. Jia¹, Y. Yang¹, S. Liang³, B. Zink¹, Y. Huang^{4,1}, D. Lyu¹, B. Dixit¹, J. Wang^{1,2,3}

¹ECE, University of Minnesota, Minneapolis, Minnesota, United States, ²School of Physics and Astronomy, University of Minnesota, Minneapolis, Minnesota, United States, ³Chemical Engineering and Materials Science, University of Minnesota, Minneapolis, Minnesota, United States, ⁴National Yang Ming Chiao Tung University, Materials Science and Engineering, Hsinchu, Taiwan

09:30 AM-09:42 AM

AD-05. Interfacial multiferroics of super-orbital-splitting type with colossal interfacial response at room temperature

H. Naganuma¹, K. Nawa², T. Ichinose², K. Amemiya⁴, Y. Sato³, T. Shiraishi³, T. Fukushima²

¹Nagoya University, Nagoya, Aichi, Japan, ²AIST, Tsukuba, Japan, ³Kumamoto University, Kumamoto, Japan, ⁴KEK, Tsukuba, Japan

09:42 AM-09:54 AM

AD-06. Double-leaf Riemann surface topological converse magnetoelectricity

Y. Zhou, S. Dong

Southeast University, Nanjing, Jiangsu, China

09:54 AM-10:30 AM

AD-08. Seeing is Believing: Imaging Magnetic Order in Multiferroics

P. Stevenson

Physics, Northeastern University, Boston, Massachusetts, United States

10:30 AM-10:42 AM

AD-09. Direct Evidence of Non-oxidative Mechanism in Oxygen Based Magnetoionics

T. Bhatnagar-Schöffmann^{2,3}, P. Schöffmann⁴, A. Resta⁴, A. Lamperti¹, G. Bernard^{2,3}, A. Kovács⁵, L. Largeau^{2,3}, A. Durnez^{2,3}, A. Harouri^{2,3}, X. Lafosse^{2,3}, D. Ourdani⁷, M. Syskaki⁶, Y. Roussigné⁷, S. Ono⁸, R. E. Dunin-Borkowski⁵, J. Langer⁶, D. Ravelosona^{2,3}, M. Belmeguenai⁹, A. Solignac^{9,3}, L. Herrera Diez^{2,3}

¹CNR-IMM, Agrate Brianza, MB, Italy, ²C2N, CNRS, Palaiseau, France, ³Université Paris-Saclay, Palaiseau, France, ⁴Synchrotron SOLEIL, Saint-Aubin, France, ⁵Forschungszentrum Jülich GmbH, Jülich, Germany, ⁶Singulus Technology AG, Kahl Am Main, Germany, ⁷CNRS-UPR 3407 Université Sorbonne Paris Nord, Villetaneuse, France, ⁸Central Research Institute of Electric Power Industry, Yokosuka, Japan, ⁹CEA, CNRS, SPEC, Gif-sur-Yvette, France

SESSION AE: NEW APPLICATIONS AND OTHER EMERGING TOPICS I

Chair(s): S. Pollard, *Physics and Materials Science, The University of Memphis, Memphis, Tennessee, United States*

Tuesday, October 28, 2025

08:30 AM-12:00 PM

Room 2DE

08:30 AM-08:42 AM

AE-03. Orbital hybridization induced changes to oscillatory dynamics in epitaxial $\text{La}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$ films

H. Chhabra, A. Jaman, I. Garcia, T. Banerjee

University of Groningen, Groningen, Netherlands

08:42 AM-08:54 AM

AE-05. A Workflow for Magnetic Material Discovery: Experimental Database meets Graph Neural Networks

B. Schoener¹, Y. Hu², H. Hui¹, Y. Liu¹, T. Wojnar¹, J. Xiong², I. Zutic¹, H. Zeng¹

¹Physics, University at Buffalo, Buffalo, New York, United States, ²Computer Science and Engineering, University at Buffalo, Buffalo, New York, United States

08:54 AM-09:06 AM

AE-06. Magnetic Tag Recognition via High-Order Projection of Far-Field Measurements

S. Ben Mbarek, S. Amara, G. Setti

CEMSE, KAUST, Jeddah, Thuwal, Saudi Arabia

09:06 AM-09:42 AM

AE-07. Integrating spins and ions for spiontronics

G. Miao^{1,2}

¹Electrical and Computer Engineering, University of Waterloo, Waterloo, Ontario, Canada, ²Institute for Quantum Computing, Waterloo, Ontario, Canada

09:42 AM-09:54 AM

AE-08. Magnetic Image Recognition Under Environmental Noise: A Machine Learning Approach

S. Amara, D. Divyanshu, S. Ben Mbarek, G. Setti

CEMSE, KAUST, Jeddah, Thuwal, Saudi Arabia

09:54 AM-10:06 AM

AE-10. Exfoliation of Hematene: An Air-Stable Non-van der Waals 2D Material Exhibiting Room-Temperature Ferromagnetism

A. Puthirath Balan^{1,2,4}, S. Radhakrishnan^{1,3}, M. Anantharaman^{1,4}, C. Tiwary^{1,5}, A. Pulickel M.¹

¹Rice University, Houston, Texas, United States, ²Johannes Gutenberg University Mainz, Mainz, Germany, ³Intel Corporation, Rio Rancho, New Mexico, United States, ⁴Cochin University of Science and Technology, Kochi, India, ⁵Indian Institute of Technology Kharapur, Kharapur, India

10:06 AM-10:18 AM

AE-11. Characterization of Current-Flux and Current-Force Relationships in Reluctance Actuators for High-Precision Applications

M. Al Saaideh¹, N. Alatawneh^{2,3}, M. Al Janaideh³

¹Memorial University of Newfoundland, St. John's, Newfoundland, Canada, ²Sacred Heart University, Fairfield, Connecticut, United States, ³University of Guelph, Guelph, Ontario, Canada

10:18 AM-10:30 AM

AE-12. Magnetocaloric properties and magnetic structures in Tb₂CoGe₂

A. Herrero¹, A. Morozkin², E. Apiñaniz³, I. Punte-Orench⁴, A. Garshev^{5,2}, V. Yapaskurt⁶, A. Oleaga¹

¹University of the Basque Country UPV/EHU, Bilbao, Spain, ²Department of Chemistry, Moscow State University, Moscow, Russian Federation, ³Universidad del País Vasco UPV/EHU, Vitoria-Gazteiz, Spain, ⁴Institute Laue Langevin, Grenoble, France, ⁵Faculty of Materials Science, Moscow State University, Moscow, Russian Federation, ⁶Department of Petrology, Moscow State University, Moscow, Russian Federation

10:30 AM-10:42 AM

AE-02. High-Gradient Magnetic Separation of Lithium Iron Phosphate in Lithium Ion Batteries

D. Rogers, P. Andrei, P. Wang

Florida State University, Tallahassee, Florida, United States

SESSION AF: SPIN-ORBIT TORQUE AND RELATED PHENOMENA

Chair(s): R. Posti, *Physics, Carnegie Mellon University, Pittsburgh, Pennsylvania, United States*

Tuesday, October 28, 2025

08:30 AM-12:00 PM

Room 2BC

08:30 AM-09:06 AM

AF-01. Symmetry-based Classification of Spin Current Origin

B. Miao

Nanjing University, Nanjing, China

09:06 AM-09:18 AM

AF-02. Observation of Field-Free Orbital Hall Torque Switching in In-Plane Magnetized NiFe/Cr Devices

A. Kumar¹, A. Ashokan.K¹, C. Kalouni¹, K. Varshney¹, V. K. Malik², D. Roy¹

¹*Physics, Indian Institute of Technology Ropar, Rupnagar, Punjab, India*, ²*Physics, Indian Institute of Technology Roorkee, Roorkee, Uttarakhand, India*

09:18 AM-09:30 AM

AF-03. Orbital Torque and Field-Free Magnetization Switching in a Light-Element-Based SOT Device

G. K. Shukla, S. Isogami

Research Centre for Magnetic and Spintronics Material, National Institute For Materials Science, Tsukuba, Ibaraki, Japan

09:30 AM-09:42 AM

AF-04. Spin-orbit torque efficiency in IrPt alloy/ferromagnet bilayers

G. Jung¹, S. Lee², S. Ko³, S. Yoon¹, W. Kim¹, H. Jeon¹, H. Cho¹, D. Woo¹, K. Kim³, B. Park⁴, J. Hong², K. Eom¹, S. Lee¹

¹*Semiconductor Engineering, Gachon University, Seongnam, Korea (the Republic of)*, ²*Materials Science and Engineering, Yonsei university, Seoul, Korea (the Republic of)*, ³*Physics, Korea Advanced Institute of Science and Technology, Daejeon, Korea (the Republic of)*, ⁴*Materials Science and Engineering, Korea Advanced Institute of Science and Technology, Daejeon, Korea (the Republic of)*

09:42 AM-09:54 AM

AF-05. Spin-orbit torque switching of both magnetization and exchange bias in Pt/IrMn/CoFeB Hall cross devices

Y. Fan, L. Wan, G. Mihajlović, J. Gibbons, J. Katine, T. Santos

Western Digital, San Jose, California, United States

09:54 AM-10:06 AM

AF-06. Spin-Orbital Conversion in Resonantly Excited Magnetization

O. A. Bakare¹, G. T. Street¹, R. E. Maizel¹, C. Klewe², S. Emori¹

¹*Physics, Virginia Tech, Blacksburg, Virginia, United States*, ²*Lawrence Berkeley National Lab, Berkeley, California, United States*

10:06 AM-10:18 AM

AF-07. Harnessing Spin Reorientation for Energy-efficient Field-free Switching by Orbital Torque

S. Das, B. Jamshed, M. Ramu, S. Piramanayagam

School of Physical & Mathematical Sciences, Nanyang Technological University, Singapore, Singapore

10:18 AM-10:45 AM

Break

10:45 AM-11:21 AM

AF-08. Orbital-Spin Hall nano oscillator

R. Gupta^{1,2}, N. Behera¹, U. Shashank¹, A. Kumar^{1,3,4}, S. Ghosh¹, J. Choi¹, J. Akerman^{1,3,4}

¹Physics, University of Gothenburg, Gothenburg, Sweden, ²Physics, University of South Florida, Tampa, Florida, United States,

³Research Institute of Electrical Communication, Tohoku University, Sendai, Japan, ⁴Center for Science and Innovation in Spintronics, Tohoku University, Sendai, Japan

11:21 AM-11:33 AM

AF-09. Spin-Orbit Torque and Nernst Effects in a Bulk Rashba Channel

J. Ahn^{1,2}, J. Jeon³, S. Cho², S. Lee², O. Lee², H. Koo^{1,2}

¹KU-KIST Graduate School of Converging Science and Technology, Korea University, Seoul, Korea (the Republic of), ²Center for Semiconductor Technology, Korea Institute of Science and Technology, Seoul, Korea (the Republic of), ³Package Manufacturing Technology Group, Samsung Electro-Mechanics, Busan, Korea (the Republic of)

11:33 AM-11:45 AM

AF-10. Enhancement of damping-like spin-orbit torque efficiency in RuO₂/αW-Ta and RuO₂/Pt systems

Y. Saito¹, S. Ikeda^{1,2}, S. Karube³, T. Endoh^{1,4}

¹Center for Innovative Integrated Electronic Systems, Tohoku University, Sendai, Japan, ²Center for Science and Innovation in Spintronics, Tohoku University, Sendai, Japan, ³Institute for Chemical Research, Kyoto University, Kyoto, Japan, ⁴Department of Electrical Engineering, Graduate School of Engineering, Tohoku University, Sendai, Japan

SESSION AG: ELECTRONIC STRUCTURE AND MAGNETIC EXCITATIONS

Chair(s): C. Beekman, Florida State University, Tallahassee, Florida, United States

Tuesday, October 28, 2025

08:30 AM-12:00 PM

Room 2A

08:30 AM-08:42 AM

AG-02. Realistic modeling of transport properties at finite temperature in magnetic materials by local quantization of a Heisenberg model

F. Engelke^{1,2}, C. Heiliger^{1,2}

¹Institute for theoretical Physics, Justus Liebig University Giessen, Giessen, Hesse, Germany, ²Center for Materials Research, Justus Liebig University Giessen, Giessen, Hesse, Germany

08:42 AM-08:54 AM

AG-03. Observation of multiple flat bands and van-Hove singularities in the distorted kagome metal NdTi₃Bi₄

M. Mondal¹, A. Sakhya¹, M. Sprague¹, B. Ortiz², M. Matzelle³, A. Kumay¹, A. Seal¹, B. Ghosh³, A. Bansil³, M. Neupane¹

¹Physics, University of Central Florida, Orlando, Florida, United States, ²Oak Ridge National lab, Oak Ridge, Tennessee, United States,

³Physics, Northeastern University, Boston, Massachusetts, United States

08:54 AM-09:06 AM

AG-04. Gapless Topological Behaviors in a Long-Range Quantum Spin Chain

S. Yang¹, H. Lin¹, X. Yu^{2,3}

¹Institute for Advanced Study in Physics and School of Physics, Zhejiang University, Hangzhou, Zhejiang, China, ²Department of Physics, Fuzhou University, Fuzhou, Fujian, China, ³Fujian Key Laboratory of Quantum Information and Quantum Optics, College of Physics and Information Engineering, Fuzhou University, Fuzhou, Fujian, China

09:06 AM-09:42 AM

AG-05. Altermagnetism: What can we believe?

P. S. Stamenov, M. T. Stamenova

School of Physics and CRANN, Trinity College, Dublin, Dublin, Ireland

09:42 AM-09:54 AM

AG-06. Electronic and Magnetic Properties of Hole Doped Topological Kagome Metal Thin Films

R. Dutta¹, P. M. Laxmeesha¹, T. Tandon¹, T. D. Tucker¹, S. Sheikh², U. M. Jayathilake², W. Tian³, A. Aczel³, T. Lee⁴, A. X. Gray², S. May¹

¹*Department of Materials Science and Engineering, College of Engineering, Drexel University, Philadelphia, Pennsylvania, United States*, ²*Department of Physics, Temple University, Philadelphia, Pennsylvania, United States*, ³*Neutron Scattering Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee, United States*, ⁴*Diamond Light Source Ltd., Didcot, United Kingdom*

09:54 AM-10:30 AM

AG-08. Beyond Altermagnetism: Unconventional Magnetism

Q. Liu

Southern University of Science and Technology, Shenzhen, Guangdong, China

SESSION AP: BIOMAGNETISM AND BIOMEDICAL APPLICATIONS I (POSTER SESSION)

Chair(s): J. Alonso Masa, *CITIMAC, University of Cantabria, Santander, Cantabria, Spain*

Tuesday, October 28, 2025

09:00 AM-12:00 PM

Exhibit Hall Posters

AP-01. Temperature Measurement of Magnetic Nanoparticles using Diamond Quantum Sensor for Magnetic Hyperthermia

Y. Arakawa, M. Inoue, S. Yabukami, A. Kuwahata

Tohoku University, Sendai, Miyagi, Japan

AP-02. Gradiometer using single bulk diamond quantum sensor for magnetic field sensing

M. Inoue, Y. Arakawa, S. Yabukami, A. Kuwahata

Tohoku University, Sendai, Japan

AP-03. Highly sensitive detection of GDF15 in Urine using magnetic nanoparticle aggregation

S. Yabukami^{1,2}, T. Murayama¹, L. Tonthat¹, K. Okita², T. Abe¹

¹*Tohoku University, Sendai, Japan*, ²*Tohoku-TMIT, Sendai, Japan*

AP-04. Hydrophilic Magnetite Nanoparticles for Biomedical Applications

E. Jaberolansar¹, S. Jan¹, R. Roy Chowdhury¹, D. A. Arena¹, S. Mohapatra², H. Srikanth¹

¹*Department of Physics, University of South Florida, Tampa, Florida, United States*, ²*Morsani College of Medicine, University of South Florida, Tampa, Florida, United States*

AP-05. Measurement of Viscoelastic Properties Using Magnetic Resonance Elastography (MRE) Technique on Brain Phantoms

M. M. William¹, W. Lohr¹, L. Schandler², V. J. Weir³, R. M. Khan⁴, R. L. Hadimani^{2,1}

¹*Biomedical Engineering, Virginia Commonwealth University, Richmond, Virginia, United States*, ²*Mechanical and Nuclear Engineering, Virginia Commonwealth University, Richmond, Virginia, United States*, ³*Department of Veterans Affairs, Central Virginia VA Health Care System, Richmond, Virginia, United States*, ⁴*Clinical Professor of Diagnostic Radiology, Virginia Commonwealth University, Richmond, Virginia, United States*

AP-06. Investigation of the Impact of Individualized Neuroanatomy and Functional Connectivity on Primary Motor Cortex Excitability During Transcranial Magnetic Stimulation

M. Paslar¹, [T.J. Taylor](#)¹, B. Embree², W. Lohr¹, T. Atalugama², C. L. Peterson¹, R. L. Hadimani^{1,2}

¹Biomedical Engineering, Virginia Commonwealth University, Richmond, Virginia, United States, ²Mechanical and Nuclear Engineering, Virginia Commonwealth University, Richmond, Virginia, United States

AP-07. Tuning Size, Shape, and Phase Composition for Enhanced Magnetic Hyperthermia in FeO/Fe₃O₄ Nanoparticles and Superclusters

W. Manuel^{1,2}, [D. Luu](#)¹, M. Gili^{1,2}, D. Brown¹, S. Jan¹, M. Nguyen³, M. Vega², T. Lee³, H. Srikanth¹, M. Phan¹

¹Department of Physics, University of South Florida, Tampa, Florida, United States, ²Materials Science and Engineering Program, College of Science, University of the Philippines Diliman, Diliman, Philippines, ³Department of Chemistry and the Texas Center for Superconductivity, University of Houston, Houston, Texas, United States

AP-08. Development of a novel Ferromagnetic Suppression Coil to Increase Focality in TMS Procedures on Small Animals

[T. V. Atalugama](#), W. Lohr, R. L. Hadimani

Department of Mechanical and Nuclear Engineering, Virginia Commonwealth University, Richmond, Virginia, United States

AP-09-LB. Simulation of Adaptive Magnetic Coils for Directionally Adjustable Targeted Neuromodulation

[P. Chan](#)¹, J. Pothuganti², G. Licwinko², W. Yu², V. Chen²

¹Indiana University, Bloomington, Indiana, United States, ²Loyola University Chicago, Chicago, Illinois, United States

AP-10-LB. Bio-resorbable magnetic tunnel junctions

[D. Kim](#)¹, B. Kim², B. Park¹, J. Ahn², H. Yang³

¹Department of Materials Science and Engineering, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea (the Republic of), ²School of Electrical and Electronic Engineering, Yonsei University, Seoul, Korea (the Republic of), ³Department of Electrical and Computer Engineering, National University of Singapore (NUS), Singapore, Singapore

SESSION AQ: INSTRUMENTATION AND MEASUREMENT TECHNIQUES (POSTER SESSION)

Chair(s): K. Islam, Physics and Materials Science, The University of Memphis, Memphis, Tennessee, United States

Tuesday, October 28, 2025

09:00 AM-12:00 PM

Exhibit Hall Posters

AQ-01. Emergence of Anomalous and Topological Hall Effects in Magnetic Topological Insulator Mn₂BiSbTe₅

[A. Saxena](#)^{1,2}

¹Program on Key Materials, National Cheng Kung University, Tainan, Tainan, Taiwan, ²Physics, National Sun Yat-sen University, Gushan, Kaohsiung, Taiwan

AQ-02. High-Precision Iron Loss Evaluation with Reduced Signal Averaging via Bayesian Inference

[T. Suwa](#)¹, N. Ono^{1,2}, S. Okamoto^{1,3,4}

¹Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai, Japan, ²Department of Applied Physics, Tohoku University, Sendai, Japan, ³Center for Science and Innovation in Spintronics, Tohoku University, Sendai, Japan, ⁴National Institute for Materials Science, Tsukuba, Japan

AQ-03. A Scalable Implementation of a 3D Magnetic Hall Sensor Card for Mapping and Monitoring Applications

[L. Messner](#)^{1,2}

¹EP-DT, CERN, Meyrin, Switzerland, ²Biomedical Engineering Group, Department of Mechatronics, University of Innsbruck, Innsbruck, Austria

AQ-04. Magnetic Orientation of Rod-shaped Diamagnetic Crystals in Rotating Magnetic Fields Based on Real-time Observation and the Analysis of Orientation Conditions

Y. Takeuchi¹, R. Kimoto¹, A. Hamasaki²

¹Muroran Institute of Technology, Muroran, Japan, ²Faculty of science, Shinshu University, Matsumoto, Japan

AQ-05. Red Blood Cell Magnetic Property Monitoring Using Cell Tracking Velocimetry: Applications to Blood Banking and Sickle Cell Disease

L. Nguyen T. Tran¹, K. Paz Gonzalez¹, H. Choe², X. Wu², P. Iyer², K. Wu³, J. Chalmers², J. Gomez-Pastora¹

¹Chemical Engineering, Texas Tech University, Lubbock, Texas, United States, ²Chemical and Biomolecular Engineering, The Ohio State University, Columbus, Ohio, United States, ³Electrical and Computer Engineering, Texas Tech University, Lubbock, Texas, United States

AQ-06. Computational Design of a Magnetic Particle Imaging (MPI) Prototype: Effects of Gradient Fields and Nanoparticle Properties on Imaging Performance

S. Mostufa, B. Rezaei, K. Wu

Department of Electrical and Computer Engineering, Texas Tech University, Lubbock, Texas, United States

AQ-07. Design of a Mechanical-part-free Rotational Magnetic Field with Minimal Poles

A. Hamasaki¹, K. Sato², H. Kawaguchi², Y. Takeuchi²

¹Faculty of science, Shinshu University, Matsumoto, Japan, ²Muroran Institute of Technology, Muroran, Japan

AQ-08. Optimization Method of Interface Exchange-Coupled Magnetic Moment in Iron-Based Dual-Phase Magnetic Materials Based on First-Principles

J. Yuan^{1,2}, D. Zhang^{1,2}, X. Chen^{1,2}, H. Zhou^{1,2}, F. Xiao^{1,2}, F. Yang^{3,4}, Y. Liu^{3,4}, C. Wang^{3,4}, T. Ma⁵, X. Guo⁵, X. Ma⁵

¹School of Electrical Engineering and Automation, Wuhan university, Wuhan, Hubei, China, ²State Key Laboratory of Power Grid Environmental Protection, School of Electrical Engineering and Automation, Wuhan University, Wuhan, Hubei, China, ³China Electric Power Research Institute, Beijing, China, ⁴State Key Laboratory of Advanced Power Transmission Technology, Beijing, China, ⁵State Grid Anhui Electric Power Co., Ltd. Huaibei Power Supply Company, Huaibei, Anhui, China

AQ-09. Structural Health Monitoring in Austenitic Steels by Means of Determining Martensitic Phases

T. Damatopoulou, X. Vourna, E. V. Hristoforou

National TU of Athens, Athens, Greece

AQ-10. Probing the Antiferromagnetic–Ferromagnetic Phase Transition in FeRh using Ultrafast Extreme Ultraviolet High Harmonic Spectroscopy

N. Li, A. Grafov, E. Sawruk, M. Lebrat, H. C. Kapteyn, M. M. Murnane

JILA, University of Colorado, Boulder, Colorado, United States

SESSION AR: MAGNETIZATION DYNAMICS (POSTER SESSION)

Co-Chair(s): A. Capua, *Electrical Engineering and Applied Physics, The Hebrew University of Jerusalem, Jerusalem, Israel*
and B. J. Assouline, *Applied Physics, The Hebrew University of Jerusalem, Jerusalem, Israel*

Tuesday, October 28, 2025

09:00 AM-12:00 PM

Exhibit Hall Posters

AR-01. Effect of oxygen ion implantation on the interfacial properties of the Pt/Co/Pt multilayer with perpendicular magnetic anisotropy

A. Sharma¹, P. Karmakar², R. Brajpuria¹, V. Reddy³, A. Gupta¹, M. Gupta³, S. Pathak¹

¹Physics, UPES Dehradun, Dehradun, Uttarakhand, India, ²Variable Energy Cyclotron Centre, Kolkata, West Bengal, India, ³UGC DAE CSR, Indore, Madhya Pradesh, India

AR-02. Depinning of Domain Walls in a Notched Ferromagnetic Nanostrip: Role of Inertial and Nonlinear Damping Effects

S. Dolui¹, S. Maity¹, S. Dwivedi¹, G. Consolo²

¹School of sciences, National Institute of Technology Andhra Pradesh, Tadepalligudem, Andhra Pradesh, India, ²Department of Mathematical and Computer Sciences, Physical Sciences and Earth Sciences, University of Messina, Messina, Italy

AR-03. Modulation of switching dynamics in magnetic tunnel junctions for low-error-rate computational random-access memory

Y. Lv, B. Dixit, J. Wang

Electrical and Computer Engineering, University of Minnesota - Twin Cities, Minneapolis, Minnesota, United States

AR-04. Nonlinear dynamics of spin waves in L-shaped ferromagnetic nanowires and nanoplatelets under high-power microwave pumping

B. Hussain¹, M. G. Cottam²

¹University of Michigan, Dearborn, Michigan, United States, ²University of Western Ontario, London, Ontario, Canada

AR-05. Data-Driven Estimation of Magnetic Nanoparticle Properties via Stochastic Langevin Model

E. Azizi¹, H. Zuo², V. K. Chugh³, R. He¹, K. Wu¹

¹Department of Electrical and Computer Engineering, Texas Tech University, Lubbock, Texas, United States, ²Lubbock High School, Lubbock, Texas, United States, ³Seagate Technology LLC, Bloomington, Minnesota, United States

AR-06. Development of High-sensitive ST-FMR with Amplitude Modulated Magnetic Field

A. Kamiryo¹, T. Horaguchi², T. Manago²

¹Osaka Metropolitan Univ., Sakai, Osaka, Japan, ²Fukuoka Univ., Fukuoka, Fukuoka, Japan

AR-07. Dynamic Control and Amplification of Spin Waves via Temporally Modulated Magnetic Fields

K. W. Sobucki, P. Gruszecki

Adam Mickiewicz University, Poznan, Poland

AR-08. Broadband Magnetization Dynamics and Multiphase Switching in Cobalt Ferrite Nanoparticles Embedded in Activated Carbon

S. Jan¹, R. Roy Chowdhury¹, N. Schulz⁴, A. I. Ojo¹, M. González de la Vega², J. Á. Blanco Rodríguez², P. Gorria^{2,3}, D. A. Arena¹, H. Srikanth¹

¹University of South Florida, Tampa, Florida, United States, ²Universidad de Oviedo, Oviedo, Spain, ³IUTA, Universidad de Oviedo, Gijón, Spain, ⁴Naval Surface Warfare Center, Panama City, Florida, United States

AR-09. Investigation of the magnetic behavior of 11 nm diameter magnetite (Fe₃O₄) nanoparticles encased in a 2 nm coating

T. M. Pekarek¹, K. O'Shea²

¹Physics, Univ. of N. Florida, Jacksonville, Florida, United States, ²Department of Chemistry and Biochemistry, Florida International Univ., Miami, Florida, United States

AR-10. PETASPIN 2.0: a high-performance CUDA™-native numerical solver for micromagnetic and ferroelectrics calculations

A. Giordano¹, A. Hasan², E. Piccolo³, D. Rodrigues³, M. Carpentieri³, G. Finocchio²

¹Department of Engineering, University of Messina, Messina, Italy, ²MIFT, University of Messina, Messina, Italy, ³Department of Electrical and Information Engineering, Politecnico di Bari, Bari, Italy

AR-11-LB. Chip-Scale Band Engineering in Doped MoS₂ Heterostructure for Spintronic Integration

N. Do¹, H. Ko², U. Palanivel³, S. Kim⁴, J. Kim⁵, H. Kim³, T. Kim¹

¹Department of Physics, Ewha Womans University, Seoul, Korea (the Republic of), ²SKKU Advanced Institute of Nanotechnology, SKKU, Suwon, Korea (the Republic of), ³Center for Ultrafast Phase Transformation, Sogang University, Seoul, Korea (the Republic of), ⁴Department of Chemistry, Sookmyung Woman's University, Seoul, Korea (the Republic of), ⁵Department of Physics, Pusan National University, Pusan, Korea (the Republic of)

AR-12. Prediction of Magnetocrystalline Anisotropy Constants in FeCoNi Thin Films Using Density of States Features

R. Sudo¹, T. Ueno¹, S. Yamashita^{1,2}, M. Oogane¹

¹Tohoku University, Sendai, Japan, ²The Max Planck Institute for Chemical Physics of Solids, Dresden, Germany

AR-13. Interpretable Machine Learning for Designing Atomic-Scale Magnets

J. Navratil¹, R. Topolnicki^{2,4}, M. Otyepka^{1,3}, P. S. Blonski^{1,3}

¹Palacky University Olomouc, Olomouc, Czechia, ²University of Wroclaw, Wroclaw, Poland, ³VSB-Technical University of Ostrava, Ostrava, Czechia, ⁴Polish Academy of Sciences, Warsaw, Poland

AR-14. Automated Experimental Platform for AI Driven Magnetic Materials Discovery

A. Huang

MTI Corporation, Richmond, California, United States

MMM MARIOKART

Tuesday, October 28, 2025

12:15 PM-01:45 PM

Room 1DE

SESSION BA: RECENT ADVANCES AND FUTURE CHALLENGES WITH NON-COLLINEAR ANTIFERROMAGNETS

Chair(s): S. Nakatsuji, *Department of Physics, University of Tokyo, Tokyo, Tokyo, Japan*

Tuesday, October 28, 2025

02:00 PM-05:30 PM

Grand Ballroom

02:00 PM-02:36 PM

BA-01. Spin Polarization of Noncollinear Antiferromagnets

E. Y. Tsymbal

University of Nebraska-Lincoln, Lincoln, Nebraska, United States

02:36 PM-03:12 PM

BA-02. Sub-nanosecond electrical switching of non-collinear antiferromagnetic Mn₃Sn through chiral-spin rotation

Y. Takeuchi^{1,2}, Y. Sato^{3,4}, Y. Yamane^{3,5}, J. Yoon^{3,4}, Y. Kanno^{3,4}, T. Uchimura^{3,4}, K. De Zoysa^{3,4}, J. Han¹, S. Kanai^{3,6}, J. Ieda⁷, H. Ohno^{3,8}, S. Fukami^{3,6,9}

¹WPI-Advanced Institute for Materials Research (WPI-AIMR), Tohoku University, Sendai, Miyagi, Japan, ²Research Center for Magnetic and Spintronic Materials (CMSM), National Institute for Materials Science (NIMS), Tsukuba, Ibaraki, Japan, ³Laboratory for Nanoelectronics and Spintronics, Research Institute of Electrical Communication (RIEC), Tohoku University, Sendai, Miyagi, Japan, ⁴Graduate School of Engineering, Tohoku University, Sendai, Miyagi, Japan, ⁵Frontier Research Institute for Interdisciplinary Sciences (FRIS), Tohoku University, Sendai, Miyagi, Japan, ⁶Center for Science and Innovation in Spintronics (CSIS), Tohoku University, Sendai, Miyagi, Japan, ⁷Advanced Science Research Center, Japan Atomic Energy Agency (JAEA), Tokai, Ibaraki, Japan, ⁸Center for Innovative Integrated Electronic Systems (CIES), Tohoku University, Sendai, Miyagi, Japan, ⁹Inamori Research Institute for Science (InaRIS), Kyoto, Kyoto, Japan

03:12 PM-03:48 PM

BA-03. Spin-torque-driven GHz magnetization dynamics in the noncollinear antiferromagnet Mn₃Sn

W. Lee¹, S. Hwang¹, H. Ko¹, B. Park¹, K. Lee¹, G. Choi²

¹KAIST, Daejeon, Korea (the Republic of), ²Sungkyunkwan University, Suwon, Korea (the Republic of)

03:48 PM-04:15 PM

Break

04:15 PM-04:51 PM

BA-04. Observation of antiferromagnetic spin torque diode effect

S. Sakamoto^{1,2}, T. Nomoto^{3,4}, T. Higo^{1,5}, Y. Hibino⁶, T. Yamamoto⁶, S. Tamaru⁶, Y. Kotani⁷, H. Kosaki¹, M. Shiga¹, D. Nishio-Hamane¹, T. Nakamura^{7,8}, T. Nozaki⁶, K. Yakushiji⁶, R. Arita^{3,9}, S. Nakatsuji^{1,5,10}, S. Miwa¹

¹The Institute for Solid State Physics, The University of Tokyo, Kashiwa, Japan, ²Institute for Materials Research, Tohoku University, Sendai, Japan, ³Research Center for Advanced Science and Technology, The University of Tokyo, Meguro, Japan, ⁴Department of Physics, Tokyo Metropolitan University, Hachioji, Japan, ⁵Department of Physics, The University of Tokyo, Bunkyo, Japan, ⁶National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan, ⁷Japan Synchrotron Radiation Research Institute (JASRI), Sayo, Japan, ⁸International Center for Synchrotron Radiation Innovation Smart, Tohoku University, Sendai, Japan, ⁹Center for Emergent Matter Science, RIKEN, Wako, Japan, ¹⁰Institute for Quantum Matter and Department of Physics and Astronomy, Johns Hopkins University, Baltimore, Maryland, United States

04:51 PM-05:27 PM

BA-05. Optically induced renormalization of coherent magnons in antiferromagnets.

D. Bossini

University of Konstanz, Konstanz, Germany

SESSION BB: BIOMAGNETIC SENSORS: FROM BENCH TO BEDSIDE

Chair(s): R. L. Hadimani, *Mechanical and Nuclear Engineering, Virginia Commonwealth University, Richmond, Virginia, United States*

Tuesday, October 28, 2025

02:00 PM-05:30 PM

Ballroom A

02:00 PM-02:36 PM

BB-01. Structure-property relationships in core-shell magnetoelectric nanowires –towards minimally invasive neural stimulation

N. Ferson, J. Andrew

Dept. of Materials Sci. & Eng., University of Florida, Gainesville, Florida, United States

02:36 PM-03:12 PM

BB-02. Magneto-LC Resonance Biosensing Technology for Advanced Biodetection and Diagnostics

M. Phan^{1,2}

¹*University of South Florida, Tampa, Florida, United States*, ²*VinUniversity, Hanoi, Viet Nam*

03:12 PM-03:48 PM

BB-03. Wireless Brain-Machine Interface with MagnetoElectric NanoParticles

E. Zhang², P. Liang¹, M. Abdel-Mottaleb³, S. Chen³, M. Shotbolt³, V. Andre³, J. Tian³, A. Scott-Vandusen³, E. Zhu³, S. Pané², S. Khizroev³

¹*Cellular Nanomed, Irvine, California, United States*, ²*Institute of Robotics and Intelligent Systems, Swiss Federal Institute of Technology, Zurich, Switzerland*, ³*University of Miami, Coral Gables, Florida, United States*

03:48 PM-04:15 PM

Break

04:15 PM-04:51 PM

BB-04. Magnetic Nanoparticles and Sensors for Antigen Tests

M. Rivas, M. Salvador, V. Pilati, J. L. Marques, J. C. Martinez-Garcia

Department of Physics, University of Oviedo, Gijón, Spain

04:51 PM-05:27 PM

BB-05. NV Centers as Quantum Sensors for Biomagnetic Signal Measurement

M. Sekino¹, M. Fushimi¹, A. Kuwahata², M. Hatano³

¹*The University of Tokyo, Tokyo, Japan*, ²*Tohoku University, Sendai, Japan*, ³*Institute of Science Tokyo, Tokyo, Japan*

SESSION BC: THERMOELECTRIC, MAGNETIC, AND SUPERCONDUCTING EFFECTS IN HYBRID HETEROSTRUCTURES AND SPIN TEXTURES

Chair(s): Y. Wu, *Electrical and Computer Engineering, University of Florida, Gainesville, Florida, United States*

Tuesday, October 28, 2025

02:00 PM-05:30 PM

Ballroom C

02:00 PM-02:12 PM

BC-01. Single-Molecule Magnets (SMM) Transport Channel Formation Along the Liftoff Produced Exposed Sides of Metal-Insulator-Semiconductor (MIS) Diodes

P. Suh

Mechanical Engineering, University of the District of Columbia, Washington DC, District of Columbia, United States

02:12 PM-02:24 PM

BC-03. Observation of nonlinear thermoelectric effect at room temperature

Y. Hirata¹, T. Kikkawa^{1,2}, H. Arisawa^{1,3}, E. Saitoh^{1,3,4}

¹Department of Applied Physics, University of Tokyo, Bunkyo-ku, Tokyo, Japan, ²ASRC, JAEA, Tokai-mura, Japan, ³CEMS, RIKEN, Wako-shi, Saitama, Japan, ⁴Beyond AI, University of Tokyo, Bunkyo-ku, Tokyo, Japan

02:24 PM-02:36 PM

BC-07. Thermally induced spin transport in in situ post-annealed NiFe₂O₄ thin films with varying lattice parameters and saturation magnetization

F. Meier¹, J. Straßburger¹, J. Biedinger¹, M. Gaerner¹, F. Peters¹, T. Samanta¹, L. Caron¹, O. Gomonay², T. Kuschel^{1,2}

¹Bielefeld University, Bielefeld, Germany, ²Johannes Gutenberg University Mainz, Mainz, Germany

02:36 PM-02:48 PM

BC-14. Chirally Coupled Magnetic Tunnel Junctions resulting from the Dzyaloshinskii-Moriya interaction *

B. Vermeulen^{1,2*}, J. Chatterjee¹, G. Talmelli¹, Y. Canvel¹, Y. Li¹, S. Rao¹, B. Sorée^{1,3,4}, K. Temst^{2,1}, V. Nguyen¹

¹IMEC, Leuven, Belgium, ²Department of Physics and Astronomy, Quantum Solid-State Physics Division, KU Leuven, Leuven, Belgium,

³Department of Electrical Engineering, ESAT-INSYS Division, KU Leuven, Leuven, Belgium, ⁴Department of Physics, Universiteit Antwerpen, Antwerpen, Belgium

02:48 PM-03:00 PM

BC-09. Distinct element-specific nanoscale magnetization dynamics following ultrafast laser excitation

E. Bernard¹, R. Jangid^{1,2}, N. Zhou Hagström¹, F. Meera¹, J. A. Brock³, M. Pancaldi⁴, D. De Angelis⁴, F. Capotondi⁴, E. Pedersoli⁴, K. Rockwell⁵, M. Keller⁶, S. Bonetti⁷, E. Fullerton³, T. Silva⁶, R. Kukreja¹

¹Materials Science and Engineering, University of California Davis, Davis, California, United States, ²NSLS-II, Brookhaven National Laboratory, Upton, New York, United States, ³Center for Memory and Recording Research, University of California San Diego, San Diego, California, United States, ⁴Elettra Sincrotrone, Trieste, Italy, ⁵Center for Magnetism and Magnetic Nanostructures, University of Colorado Colorado Springs, Colorado Springs, Colorado, United States, ⁶Quantum Electromagnetics Division, NIST, Boulder, Colorado, United States, ⁷Molecular Sciences and Nanosystems, a' Foscari University of Venice, Venice, Italy

03:00 PM-03:12 PM

BC-11. Néel Domain Walls with Bistable Chirality in a Perpendicularly Magnetized Ferrimagnetic Insulator

Y. Song¹, S. Huang¹, D. Bono¹, J. Sadowski², C. A. Ross¹, G. Beach¹

¹Massachusetts Institute of Technology, Cambridge, Massachusetts, United States, ²Brookhaven National Laboratory, Upton, New York, United States

03:12 PM-03:24 PM

BC-12. Meron chirality selection by transverse magnetic fields at reconfigurable domain wall racetrack

V. V. Fernandez^{1,2}, A. Herguedas^{1,2}, C. Quirós^{1,2}, P. Suarez-Blanco¹, C. Fernandez-Gonzalez³, A. Sorrentino³, S. Ferrer³, A. Hierro-Rodriguez^{1,2}, M. Velez^{1,2}

¹Universidad de Oviedo, OVIEDO, Spain, ²CINN (CSIC-UO), El Entrego, Spain, ³Alba Synchrotron, Cerdanyola del Vallès, Spain

03:24 PM-03:36 PM

BC-13. Vortex Nernst effect in ferrimagnetic insulator/high-temperature superconductor heterostructures

M. Yang, J. Li

Department of Physics, Southern University of Science and Technology, Shengzheng, GuangDong, China

SESSION BD: SOFT MAGNETIC MATERIALS I

Co-Chair(s): C. Chinnasamy, *Manufacturing Science Division, Oak Ridge National Laboratory, Knoxville, Tennessee, United States*
and P. Kulik, *University of Central Florida, Orlando, Florida, United States*

Tuesday, October 28, 2025

02:00 PM-05:30 PM

Ballroom B

02:00 PM-02:36 PM

BD-01. Iron Nitride Based Nanocomposite Magnet and its Prototype Motor Application

T. Ogawa^{1,2}, S. Yamamoto³, N. Kobayashi², H. Yamamoto², K. Nakamura¹

¹*Graduate School of Engineering, Tohoku University, Sendai, Japan*, ²*Future Materialz Co. Ltd., Tokyo, Japan*, ³*Sankei Giken Kogyo Co. Ltd., Tokyo, Japan*

02:36 PM-02:48 PM

BD-02. Theoretical Investigation of Magnetic Moment Enhancement in $(\text{Fe}_{1-x}\text{Co}_x)_{16}\text{N}_2$ Compared to $\text{Fe}_{1-x}\text{Co}_x$ Alloy

Y. Asari¹, T. Tabata¹, M. Noujima¹, S. Terada¹, M. Enoki², T. Ogawa³

¹*Hitachi, Ltd, Hitachi, Japan*, ²*Shimane university, Matsue, Japan*, ³*Tohoku university, Sendai, Japan*

02:48 PM-03:00 PM

BD-03. Microstructure and permeability of Fe-deficient Ni-Cu-Zn ferrites sintered under reduced oxygen partial pressure

C. Priese, J. Töpfer

Ernst-Abbe-Hochschule Jena, Jena, Germany

03:00 PM-03:12 PM

BD-04. $\text{Nd}_2\text{Fe}_{17}\text{N}_3$ with planar magnetocrystalline anisotropy for sub-terahertz broadband absorbers

S. Abe¹, J. Akamatsu¹, N. Mitsui¹, N. Imaoka¹, S. Okada², K. Ozaki²

¹*Nichia Corporation, Anan, Japan*, ²*National Institute of Advanced Industrial Science and Technology (AIST), Nagoya, Japan*

03:12 PM-03:24 PM

BD-05. Role of Dipolar Interactions on the Determination of Effective Magnetic Anisotropy in Biopolymer coated Eu doped Magnetite Nanoparticles

K. Hazarika, D. P. Borah

Department of Science and Humanities, National Institute of Technology, DIMAPUR, Nagaland, India

03:24 PM-03:36 PM

BD-06. Advanced In-Situ Friction Stir Forging of Soft Magnetic Composites for Axial-Flux Electric Motor Applications

R. Kalsar¹, H. Das¹, S. Shukla¹, L. Li¹, T. Ajantiwalay¹, J. Haag¹, T. P. Chhetri¹, B. Gwalani², V. Joshi¹, C. Chinnasamy³

¹*Pacific Northwest National Laboratory, Richland, Washington, United States*, ²*North Carolina State University, Raleigh, North Carolina, United States*, ³*Manufacturing Science Division, Oak Ridge National Laboratory, Knoxville, Tennessee, United States*

03:36 PM-03:48 PM

BD-07. Minnealloy Fabrication for High Power Transformers

A. S. Padgett¹, S. R. Bishop¹, J. D. Boissiere¹, C. R. Riley¹, P. F. Weck¹, S. Percival¹, D. Bosomtwi¹, A. R. Marotta¹, D. Richards¹, W. Echtenkamp², J. Wang²

¹Sandia National Laboratories, Albuquerque, New Mexico, United States, ²University of Minnesota, Minneapolis, Minnesota, United States

03:48 PM-04:15 PM

Break

04:15 PM-04:27 PM

BD-08. Co-sputtered FeCo-ALN Thin Films with Ultra-high Resistivity for High-Frequency Integrated Magnetics

R. Anjum, G. Wei, A. Masood, R. Sai

Integrated Power and Energy Systems, Tyndall National Institute, Cork, Ireland

04:27 PM-04:39 PM

BD-09. Bipolar Faraday Rotation Garnets for Integrated Magnet-free Isolators on Si

P. Liu¹, B. Moghal², B. Stadler^{2,1}

¹Chemical Engineering and Materials Science, University of Minnesota, Minneapolis, Minnesota, United States, ²Electrical and Computer Engineering, University of Minnesota, Minneapolis, Minnesota, United States

04:39 PM-04:51 PM

BD-10. Micromagnetic Modeling of Gap-Controlled Permeability in Realistically Structured Soft Magnetic Materials

J. Duan, V. Lomakin

University of California San Diego, San Diego, California, United States

04:51 PM-05:03 PM

BD-11. Engineering High Thermal Stability in Zr/Nb-doped CoFeB for High Power Conditioning in Extreme Environments

M. F. Mancias¹, N. M. Bruno², V. Keylin², A. Leary², K. Chinnathambi³, R. D. Noebe², K. Srinivasan¹

¹Electrical and Computer Engineering, Boise State University, Boise, Idaho, United States, ²Materials and Structures Division, NASA Glenn Research Center, Cleveland, Ohio, United States, ³Boise State Center for Materials Characterization, Boise State University, Boise, Idaho, United States

05:03 PM-05:15 PM

BD-12. Soft magnetic properties of Fe-Co-B-Si-Cu nanocrystalline alloys at high temperatures

I. Skorvanek¹, J. Marcin¹, B. Kunca¹, P. Svec jr.², P. Svec²

¹Institute of Experimental Physics, SAS, Kosice, Slovakia, ²Institute of Physics, SAS, Bratislava, Slovakia

05:15 PM-05:27 PM

BD-13. Fabrication of soft magnetic cores composed of amorphous Fe-B particles for next-generation magnetic passive components

S. Aija¹, C. Masumoto¹, Y. Kodama¹, T. Miyazaki², S. Muroga¹, Y. Endo^{1,3}

¹Department of Electrical Engineering, Tohoku University, Sendai, Japan, ²School of Engineering, Tohoku University, Sendai, Japan,

³CSIS, Tohoku University, Sendai, Japan

SESSION BE: MAGNETO-OPTIC AND MAGNETO-CALORIC MATERIALS AND DEVICES

Co-Chair(s): A. Biswas, *Ames National Laboratory, Ames, Iowa, United States* and M. Khan, *Physics, Miami University, Oxford, Ohio, United States*

Tuesday, October 28, 2025

02:00 PM-05:30 PM

Room 2DE

02:00 PM-02:36 PM

BE-01. High-efficiency Optical Training of Spin Textures in 2D Magnets

C. Gong

University of Maryland, College Park, Maryland, United States

02:36 PM-02:48 PM

BE-03. Stochastic magnetic tunnel junction arrays for infrared sensing

A. Deka², U. Singh¹, L. Bauer¹, M. Mousa¹, B. Prasad³, Z. Jacob¹

¹*ECE, Purdue University, West Lafayette, Indiana, United States*, ²*Birck Nanotechnology Center, Purdue University, West Lafayette, Indiana, United States*, ³*Indian Institute of Science, Bangalore, India*

02:48 PM-03:00 PM

BE-04. Multi-Lanthanide Metal-Organic Frameworks: From Multifunctional Magnetic Materials to Quantum Applications

E. Bartolomé¹, X. Liu¹, A. Arauzo³, Z. Li², J. Giner-Planas¹

¹*Institut de Ciència de Materials de Barcelona (ICMAB), Barcelona, Spain*, ²*Shandong Provincial Key Laboratory of Monocrystalline Silicon Semiconductor Materials and Technology, Dezhou University, Dezhou, China*, ³*Condensed Matter Physics, Instituto de Nanociencia y Materiales de Aragón (INMA)-Universidad de Zaragoza, Zaragoza, Spain*

03:00 PM-03:12 PM

BE-07. Theoretical Modeling of Magnetocaloric Effect During Hexagonal-Orthorhombic Phase Transition

A. Kosogor^{1,2,3}, D. Böhm¹, T. Schrefl¹

¹*University for Continuing Education Krems, Krems, Austria*, ²*Faculty of Physics, University of Vienna, Vienna, Austria*, ³*V.G. Baryakhtar Institute of Magnetism of the NAS of Ukraine, Kyiv, Ukraine*

03:12 PM-03:24 PM

BE-10. Magnetic and magnetocaloric properties of the new $Gd_3Co_{1-x}Ni_x$ solid solution

A. Herrero¹, A. Provino^{2,3}, I. Aseguinolaza¹, S. De Negri², D. Peddis^{2,4}, P. Manfrinetti^{2,3}, A. Oleaga¹

¹*University of the Basque Country, Bilbao, Spain*, ²*Department of Chemistry, University of Genova, Genova, Italy*, ³*CNR, Institute SPIN, Genova, Italy*, ⁴*CNR, Institute of Structure of Matter, Genova, Italy*

03:24 PM-03:36 PM

BE-13. Magnetocaloric Properties of $Gd_{1-x}Er_xNiAl$ Alloys near Hydrogen Liquefaction Temperatures

P. Chaitanya¹, A. Kumar², L. Patra^{3,4}, J. P. Nunez¹, E. R. Canavan⁵, B. Liao⁴, M. J. Dipirro⁵, Y. Mudryk², R. L. Hadimani¹

¹*Department of Mechanical and Nuclear Engineering, Virginia Commonwealth University, Richmond, Virginia, United States*, ²*Ames Laboratory, Iowa State University, Ames, Iowa, United States*, ³*Department of Mechanical Engineering, Georgia Institute of Technology, Atlanta, Georgia, United States*, ⁴*Department of Mechanical Engineering, University of California, Santa Barbara, Santa Barbara, California, United States*, ⁵*Cryogenics and Fluids Branch, Code 552, NASA Goddard Space Flight Center, Greenbelt, Maryland, United States*

03:36 PM-03:48 PM

BE-08. From Concept to Operation: Design Strategies, Experimental Evaluation, and Engineering Challenges across Three Generations of a Magnetocaloric Air Conditioner *

G. Fidelis Peixer^{2*}, A. Lorenzoni², P. Vitor de Faria², D. D. Reif³, A. T. Dias Nakashima², C. Silva Teixeira³, J. A. Lozano², J. Riso Barbosa Jr.^{1,2}

¹Craft & Hawkins Department of Petroleum Engineering, Louisiana State University, Baton Rouge, Louisiana, United States, ²POLO - Research Laboratories for Emerging Technologies in Cooling and Thermophysics,, Federal University of Santa Catarina, Florianópolis, Santa Catarina, Brazil, ³Lab3M - Laboratory of Magnetism and Magnetic Materials, Federal University of Santa Catarina, Blumenau, Santa Catarina, Brazil

SESSION BF: STT-MRAM AND SOT-MRAM AND RELATED DEVICES

Chair(s): D. Kim, *Department of Materials Science and Engineering, KAIST, Daejeon, Korea (the Republic of)*

Tuesday, October 28, 2025

02:00 PM-05:30 PM

Room 2BC

02:00 PM-02:36 PM

BF-01. Energy Efficient Spintronic Devices for Memory and Computing by New Materials, New Physics and Voltage Control

J. Wang^{1,2,3}, Y. Yang¹, Y. Chen¹, Q. Jia¹, S. Lee¹, T. Low¹, O. Benally¹, B. Dixit¹, D. Sousa¹, T. Peterson³, D. Lyu¹, M. Odlyzko⁴, J. Garcia-Barriocanal⁴, G. Yu⁴, G. Haugstad⁴, Y. Fan¹, Y. Huang¹, Y. Lv¹, S. Liang², B. Zink¹, Z. Cresswell²

¹Electrical and Computer Engineering, University of Minnesota, Minneapolis, Minnesota, United States, ²Chemical Engineering and Materials Science, University of Minnesota, Minneapolis, Minnesota, United States, ³Physics, University of Minnesota, Minneapolis, Minnesota, United States, ⁴Characterization Facility, University of Minnesota, Minneapolis, Minnesota, United States

02:36 PM-02:48 PM

BF-02. Large Voltage-Controlled Magnetic Anisotropy in 3X-nm Perpendicular Magnetic Tunnel Junctions

J. G. Athas¹, C. Duffee¹, T. Neuner¹, N. Davila², J. Katine², P. Khalili Amiri¹

¹Electrical and Computer Engineering, Northwestern University, Evanston, Illinois, United States, ²Western Digital Corporation, San Jose, California, United States

02:48 PM-03:00 PM

BF-03. Improved VCMA Coefficients in Perpendicular MRAM Measured With Device-Level Spin-Torque Ferromagnetic Resonance

R. V. Chopdekar, H. J. Richter, J. Li, T. Santos

Western Digital Research Center, Western Digital Corporation, San Jose, California, United States

03:00 PM-03:12 PM

BF-04. Spin transfer torque switching in double magnetic tunnel junctions based on dual MgO layers

W. Jung, G. Mihajlović, R. V. Chopdekar, J. Lille, M. Grobis, T. Santos

Western Digital, San Jose, California, United States

03:12 PM-03:24 PM

BF-05. Perpendicular Magnetic Tunnel Junction with Co-Ni-based Synthetic Antiferromagnet

W. Skowronski¹, M. Cierpial¹, D. Maslanka¹, K. Gubala¹, J. Mojsiejuk¹, K. Grochot¹, J. Wrona², J. Langer², T. Nan³

¹Institute of Electronics, AGH University of Krakow, Krakow, Poland, ²Singulus Technologies, Kahl am Main, Germany, ³School of Integrated Circuit, Tsinghua University, Beijing, China

03:24 PM-03:36 PM

BF-06. Electrical Detection of Synthetic Antiferromagnet States via Tunnel Magnetoresistance

D. Giuliano^{1,2}, B. Vermeulen^{1,2}, V. Kateel¹, G. Talmelli¹, M. Gama Monteiro¹, S. Rao¹, C. Fleischmann^{1,2}, K. Temst^{2,1}, V. Nguyen¹
¹Imec, Leuven, Belgium, ²Physics and Astronomy, KU Leuven, Leuven, Belgium

03:36 PM-03:48 PM

BF-07. Multi-level spin-orbit torque magnetic nanoarray for process-in-memory applications

D. Koh, M. Kang, D. Kim, B. Park

Materials Science and Engineering, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea (the Republic of)

03:48 PM-04:15 PM

Break

04:15 PM-04:27 PM

BF-08. Domain Wall Leaky-Integrate-Fire Dendrites with Spatiotemporally Varied Inputs for Event-Based Sensing

H. Jin¹, F. Chance², C. H. Bennett², S. G. Cardwell², J. Incorvia¹

¹Chandra Family Department of Electrical and Computer Engineering, University of Texas at Austin, Austin, Texas, United States,

²Sandia National Laboratories, Albuquerque, New Mexico, United States

04:27 PM-04:39 PM

BF-09. Standby Magnetic Immunity Calculator

A. Talapatra¹, F. Schlaphof¹, P. Scharf¹, M. Mansueto¹, D. Sanchez Hazen¹, J. Müller¹, S. Soss², A. Zaka¹

¹GlobalFoundries, Dresden, Germany, ²GlobalFoundries, Malta, New York, United States

04:39 PM-04:51 PM

BF-10. Harnessing GHz Frequency Spin-Orbit Torque for Spin-Wave Amplification in Cobalt Nanomagnets

P. Pal¹, R. Fabiha², A. Mondal¹, S. Bandyopadhyay², A. Barman¹

¹Department of Condensed Matter and Materials Physics, S. N. Bose National Centre for Basic Sciences, Kolkata, West Bengal, India,

²Department of Electrical and Computer Engineering, Virginia Commonwealth University, Richmond, Virginia, United States

SESSION BG: HARD MAGNETIC MATERIALS I: SM-BASED AND RARE EARTH FREE MAGNETS

Chair(s): H. Parmar, Critical Materials Institute Hub, Ames National Laboratory, Ames, Iowa, United States

Tuesday, October 28, 2025

02:00 PM-05:30 PM

Room 2A

02:00 PM-02:36 PM

BG-01. High Entropy Thin Films with High Magnetic Anisotropy and Tunable Magnetic Order

W. Beeson¹, D. Bista¹, D. Bhattacharya¹, H. Zhang^{2,3}, S. Krylyuk², N. Naushin⁴, A. T. N'Diaye⁵, R. Kukreja⁴, A. Davydov², G. Yin¹, K. Liu¹

¹Physics Department, Georgetown University, Washington, District of Columbia, United States, ²National Institute of Standards and Technology, Gaithersburg, Maryland, United States, ³Theiss Research, Inc, La Jolla, California, United States, ⁴University of California, Davis, Davis, California, United States, ⁵Lawrence Berkeley National Lab, Berkeley, California, United States

02:36 PM-02:48 PM

BG-02. Investigation of the phase formation and thermal stability of the L1₀ phase in the MnAlCu system

H. Baldino¹, N. Schnitzer^{2,3}, Z. Monem⁴, S. Rego⁵, D. Hedlund⁵, D. Heiman^{6,7}, B. Cui⁸, L. Li⁴, D. Muller^{3,9}, P. Kulik^{1,5}

¹Material Science and Engineering, University of central Florida, Orlando, Florida, United States, ²Material Science and Engineering, Cornell University, Ithaca, New York, United States, ³Kavli Institute at Cornell for Nanoscale Science, Cornell University, Ithaca, New York, United States, ⁴Mechanical and Aerospace Engineering, University of Central Florida, Orlando, Florida, United States, ⁵Electrical

and Computer Engineering, University of Central Florida, Orlando, Florida, United States, ⁶Physics, Northeastern University, Boston, Massachusetts, United States, ⁷Plasma science and Fusion center, Massachusetts Institute of Technology, Cambridge, Massachusetts, United States, ⁸Division of Critical Materials, Ames National Laboratory, Ames, Iowa, United States, ⁹School of Applied and Engineering Physics, Cornell University, Ithaca, New York, United States

02:48 PM-03:00 PM

BG-03. A New Approach in Sintered Mn-Bi Magnets via Silane Coupling Agent

Y. Song^{1,2}, B. Zhang^{1,3}, X. Zheng^{1,3}, C. Choi¹, K. Jong-Woo¹, K. Lee², J. Park¹

¹Nano Materials Research Division, Korea Institute of Materials Science, Changwon, Gyeongsangnam-do, Korea (the Republic of),

²School of Materials Science and Engineering, Ulsan National Institute of Science and Technology (UNIST), Ulsan, Korea (the

Republic of), ³Division of Materials Science and Engineering, Pusan National University, Busan, Korea (the Republic of)

03:00 PM-03:12 PM

BG-04. A Material Processing Perspective on Exchange-Spring Permanent Magnets

T. Lamichhane

Engineering & Physics, University of Central Oklahoma, Edmond, Oklahoma, United States

03:12 PM-03:24 PM

BG-05. Enhancing Magnetic Performance of AlNiCo Permanent Magnets via Magnetic Field-Assisted Directed Energy Deposition

O. Bishop^{1,2}, A. R. Duong¹, I. M. Smith³, E. E. Carpenter³, K. Snyder², R. Barua¹

¹Mechanical and Nuclear Engineering, Virginia Commonwealth University, Richmond, Virginia, United States, ²Commonwealth Center

for Advanced Manufacturing, Disputanta, Virginia, United States, ³Chemistry, Virginia Commonwealth University, Richmond, Virginia,

United States

03:24 PM-03:36 PM

BG-06. Magnetic Behavior of Co(Mo) Nanoparticles

S. Dhapola^{1,2}, D. Sagar³, A. Kashyap³, J. Shield^{1,2}

¹Mechanical and Materials Engineering, University of Nebraska-Lincoln, Lincoln, Nebraska, United States, ²Nebraska Center for

Materials and Nanoscience, University of Nebraska-Lincoln, Lincoln, Nebraska, United States, ³School of Physical Sciences, Indian

Institute of Technology, Mandi, Himanchal Pradesh, India

03:36 PM-03:48 PM

BG-07. The Possibility of New Complex Magnet Materials

J. Snyder

northwestern, EVANSTON, Illinois, United States

03:48 PM-04:15 PM

Break

04:15 PM-04:27 PM

BG-08. Investigation on magnetic properties of anisotropic nanocrystalline Sm-Co-Cu magnets

K. Park¹, Y. Hirayama¹, Y. Akita²

¹Multi-Material Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Nagoya, Japan, ²AISIN

Corporation, Kariya, Japan

04:27 PM-04:39 PM

BG-09. Exploring stable sites and compositional ranges in $\text{Sm}_2\text{Fe}_{17}\text{M}_x$ ($M = \text{H}, \text{C}, \text{N}$) using neural network potentials

Y. Tatetsu

Health Informatics, Meio University, Nago, Okinawa, Japan

04:39 PM-04:51 PM

BG-10. Microstructure–Magnetism Correlation in SmCo₅-Based Materials via Solid-State Design Strategies

F. Ishrak, M. Lastovich, M. Uddin, F. Tsai, B. Gwalani

Materials Science and Engineering, North Carolina State University, Raleigh, North Carolina, United States

04:51 PM-05:03 PM

BG-11. Improvement of Thermal Stability of TbCu₇ Sm-Fe phase by Addition of Zr and Y in Synthesis of the Fine Powder with Low-temperature Reduction-Diffusion

S. Okada

Multi-Material Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Nagoya, Aichi, Japan

05:03 PM-05:15 PM

BG-12. High coercivity TbCu₇-type Sm-Fe-N powder prepared by induction thermal plasma process

Y. Hirayama, Z. Liu, W. Yamaguchi

National Institute of Advanced Industrial Science and Technology, Nagoya, Japan

05:15 PM-05:27 PM

BG-13. First-Principles Prediction of Permanent Magnetism in SmFe₁₁Ti

B. Narangerel¹, M. Adiya¹, D. Odkhuu^{1,2}

¹*Department of Physics, Incheon National University, Incheon, Korea (the Republic of)*, ²*Institute of Physics and Technology, Mongolian Academy of Sciences, Ulaanbaatar, Mongolia*

SESSION BP: MAGNONICS I: SPIN WAVES & SPIN DYNAMICS (POSTER SESSION)

Chair(s): J. Zhou, *Institute of Materials Research and Engineering, A*STAR, Singapore, Singapore*

Tuesday, October 28, 2025

02:30 PM-05:30 PM

Exhibit Hall Posters

BP-01. Magnetic field dependence of dipole-exchange spin waves in square ferromagnetic nanorings

A. Frost¹, B. Hussain¹, M. G. Cottam²

¹*University of Michigan, Dearborn, Michigan, United States*, ²*University of Western Ontario, London, Ontario, Canada*

BP-02. Nanoscale Quantum Imaging of Caustic Spin-Wave in YIG Film

T. Zheng, E. Zhang, B. Yang, J. Zhu

Department of Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, Pennsylvania, United States

BP-03. Dynamic Spin-Wave Characterization in Ferrimagnetic Insulators: Time-Resolved Imaging and Frequency Domain Analysis

V. Ganepola Arachchige¹, Z. Ishraque¹, S. Alaei², S. Wintz³, Y. Suzuki², R. Knut⁴, D. A. Arena¹

¹*Department of Physics, University of South Florida, Tampa, Florida, United States*, ²*Department of Physics, Stanford University, Stanford, California, United States*, ³*Helmholtz-Zentrum Berlin, Berlin, Germany*, ⁴*Department of Physics and Astronomy, Uppsala University, Uppsala, Sweden*

BP-04-LB. Ultra-small fine particle inspection system for LIB cathode by HTS SQUIDs

S. Tanaka¹, P. Polkotuwa², T. Ohtani²

¹*Institute for Research on Next-generation Semiconductor and Sensing Science (IRES2), Toyohashi University of Technology, Toyohashi, Aichi, Japan*, ²*R & D Division, Nikka Densok Limited, Kawagoe, Saitama, Japan*

BP-05-LB. Tunable Coupling, Topology, and Chirality by Antimagnons in Magnetic Multilayer

Y. Liu¹, Z. Chen², Q. Shao¹

¹Electronic Engineering, The Hong Kong University of Science and Technology, Hong Kong, Hong Kong, ²Physics, The Hong Kong University of Science and Technology, Hong Kong, Hong Kong

BP-06. Magnon Superlattices around Skyrmions in Frustrated Magnets

A. Hullahalli^{1,2}, C. Panagopoulos¹, C. Psaroudaki²

¹Nanyang Technological University, Singapore, Singapore, ²École Normale Supérieure, Paris, France

BP-07. Role of interfacial Dzyaloshinskii-Moriya interactions on dipole-exchange spin waves in ferromagnetic nanoribbons

S. Hussain¹, B. Hussain², M. G. Cottam³

¹Orange Coast College, Costa Mesa, California, United States, ²University of Michigan, Dearborn, California, United States, ³University of Western Ontario, London, Ontario, Canada

BP-09. Simulating Magnon Dispersion of Layered Antiferromagnets

T. Jeffrey, E. Stimpson, J. Sklenar

Physics & Astronomy, Wayne State University, Detroit, Michigan, United States

BP-10. Observation of breathing magnetic domain wall at ferromagnetic nanowires

S. Ahn

Postech, Pohang, Korea (the Republic of)

SESSION BQ: TRANSFORMERS AND POWER ELECTRONICS I (POSTER SESSION)

Chair(s): H. Matsumori, Nagoya Institute of Technology, Nagoya, Japan

Tuesday, October 28, 2025

02:30 PM-05:30 PM

Exhibit Hall Posters

BQ-01. Structural Design of a Common-Mode Inductor with Metal Casing for Improved High-Frequency Performance

Y. Ueda¹, H. Matsumori¹, K. Nagayoshi²

¹Electrical and Mechanical Eng., Nagoya Institute of Technology, Nagoya, Aichi, Japan, ²Toyota industries corporation, Nagoya, Aichi, Japan

BQ-02. A Study on volume reduction and power density improvement of motor using PCB stator

Y. Lim, D. Choi, Y. Lee, J. Lee, W. Kim

Electrical Engineering, Gachon University, Seongnam-si, Gyeonggi-do, Korea (the Republic of)

BQ-03. Thin-film YIG-based Tunable Inductors at Microwave Frequencies

S. Sultana, D. Hedlund, P. Kulik

University of Central Florida, Orlando, Florida, United States

BQ-04. New Slim Microspeaker Design for Smartwatches with Halbach Array Magnetic Circuit

Y. Jeong¹, J. Park¹, D. Xu², S. Hwang¹

¹Department of Mechanical Engineering, Pusan National University, Busan, Korea (the Republic of), ²School of Mechatronic Engineering and Automation, Shanghai University, Shanghai, China

BQ-05. A Heating Power Optimization Method for Electro-Thermal Multi-Energy Flexible Generator Based on Composite Anisotropic Materials

J. Yuan^{1,3}, H. Wang^{1,3}, B. Peng^{1,3}, H. Zhou^{1,3}, X. Chen², Q. Wang²

¹School of Electrical Engineering and Automation, Wuhan University, Wuhan, Hubei, China, ²Electric Power Research Institute China Southern Power Grid, Guangzhou, China, ³State Key Laboratory of Power Grid Environmental Protection, School of Electrical Engineering and Automation, Wuhan University, Wuhan, Hubei, China

BQ-06. Configuration of Transmitter and Receiver of Wireless Power Transfer System while Driving for Electric Vehicles (EVs)

K. Hidaka¹, F. Sato¹, O. Ito¹, S. Miyahara¹, S. Sasaki²

¹Tohoku Gakuin University, Sendai, Miyagi, Japan, ²Hikaridenshi .CO.,LTD., Osaka, Miyagi, Japan

BQ-07. Research on a Nanocrystalline Amorphous-Based Magnetically Saturated Bridge Arm Coupled Reactor Applied in MMC-HVDC Systems

J. Yuan, W. Zhang, H. Zhou, J. L. Liu, Y. Sun, J. Liu, D. Zhang

Wuhan University, Wuhan, China

BQ-09. Design and Analysis of Nanocrystalline Core for Low-Temperature-Rise Anode Saturation Reactor

X. Li^{2,1}, J. Yuan^{2,1}, H. Zhou^{2,1}, Z. Mo¹, Y. Wang¹, J. Hou^{2,1}

¹School of Electrical Engineering and Automation, Wuhan University, Wuhan, China, ²State Key Laboratory of Power Grid Environmental Protection, School of Electrical Engineering and Automation, Wuhan University, Wuhan, China

BQ-10. Research on Adjustment Range Expansion of Orthogonal Controllable Reactors Based on Low-Saturation-Point Core Materials

J. Hou^{1,2}, J. Yuan^{1,2}, H. He^{1,2}, G. Ma^{1,2}, X. Li^{1,2}, H. Liu^{1,2}, H. Zhou^{1,2}

¹State Key Laboratory of Power Grid Environmental Protection, Wuhan University, Wuhan, China, ²School of Electrical Engineering and Automation, Wuhan University, Wuhan, China

SESSION BR: ENERGY ASSISTED MAGNETIC RECORDING & MAGNETIC SENSORS (POSTER SESSION)

Co-Chair(s): N. A. Natekar, *Western Digital, San Jose, California, United States* and T. Kubota, *Advanced Spintronics Medical Engineering, Tohoku University, Sendai, Miyagi, Japan*

Tuesday, October 28, 2025

02:30 PM-05:30 PM

Exhibit Hall Posters

BR-01. Magnetization dynamics: maxwell equation based approach

K. Rivkin

RKMAG Corporation, Pacific Grove, California, United States

BR-02. Cubic Anisotropy Media for Microwave Assisted Magnetic Recording

S. Greaves¹, Y. Kanai²

¹RIEC, Tohoku University, Sendai, Japan, ²Niigata Institute of Technology, Kashiwazaki, Japan

BR-03. Plasmonic Nanoantennas for Helicity-Dependent All-Optical Switching

T. E. McCormack, J. Scott, W. R. Hendren, N. Kuninski, R. M. Bowman

Centre for Quantum Materials and Technologies, Queen's University Belfast, Belfast, Antrim, United Kingdom

BR-04. Effect of rare earth metal substitution in FePt-C granular films on magnetic properties and nanostructure

K. Tham¹, D. Miyazaki¹, S. Saito²

¹Tanaka Precious Metal Technologies, Tsukuba, Japan, ²Tohoku University, Sendai, Japan

BR-05. FePt granular films with rare earth metal oxides as ferromagnetic grain boundary materials

D. Miyazaki¹, K. Tham¹, S. Saito²

¹Tanaka Precious Metal Technologies, Tsukuba, Ibaraki, Japan, ²Tohoku University, Sendai, Miyagi, Japan

BR-06. Thermally Activated Magnetic Switching in Films with Perpendicular and Random Anisotropies

D. Alharbi^{1,2}, M. Guy¹, M. Davis¹, F. Bakhshizadeh¹, F. Efe¹, A. Lisfi¹

¹Physics, Morgan State University, Baltimore, Maryland, United States, ²Physics, The Catholic University of America, Washington DC, District of Columbia, United States

BR-07. A Frequency-Tunable Copper Coil-Based Microfluidic Sensor for High-Throughput Screening and Magnetic Biomarker Detection

D. Brown¹, W. Manuel^{1,2}, D. Luu¹, M. Gili^{1,2}, M. Vega², M. Phan¹

¹Department of Physics, University of South Florida, Tampa, Florida, United States, ²Materials Science and Engineering Program, College of Science, University of the Philippines, Diliman, Philippines

BR-08. Highly Sensitive Magnetic Sensor Using Superparamagnetic Tunnel Junctions with Stochastic Magnetization Reversal

R. Hirama¹, T. Kubota², M. Endo², K. Fujiwara³, S. Sasaki⁴, H. Yutaka⁴, L. Sakai⁴, M. Hosomi⁴, M. Oogane¹

¹Department of Applied Physics, Graduate School of Engineering, Tohoku University, Sendai, Miyagi Prefecture, Japan, ²Department of Advanced Spintronics Medical Engineering, Graduate School of Engineering, Tohoku University, Sendai, Miyagi Prefecture, Japan, ³Spin Sensing Factory Corporation, Sendai, Miyagi Prefecture, Japan, ⁴Sony Semiconductor Solutions, Minato ku, Tokyo, Japan

BR-09. Methods for Quantifying Parameter Estimation Uncertainty in Eddy Current Testing of Coated Steel Sheets

M. Koll¹, D. Wöckinger¹, G. Bramerdorfer¹, N. Gstöttenbauer², S. Scheiblhofer², S. Schuster², J. Reisinger²

¹Institute of Electric Drives and Power Electronics, Johannes Kepler University, Linz, Austria, ²voestalpine Stahl GmbH, Linz, Austria

BR-10. Electromagnetic Material Characteristics of Steels Used for Hot-dip Galvanization and their Impact on the Coating Thickness Estimation Bias in Eddy Current Testing

M. Koll¹, D. Wöckinger¹, M. Peer¹, C. Dobler¹, G. Bramerdorfer¹, N. Gstöttenbauer², S. Scheiblhofer², S. Schuster², J. Reisinger²

¹Institute of Electric Drives and Power Electronics, Johannes Kepler University, Linz, Austria, ²voestalpine Stahl GmbH, Linz, Austria

BR-11. Variable Exploration of Micromagnetic Simulations of Concentration Detection Range of Large Area Low Aspect Ratio GMR Sensors in Biomedical Diagnostics

R. A. Mendonsa, S. Liang, J. Wang

University of Minnesota, Minneapolis, Minnesota, United States

BR-12. Tuning TMR magnetic sensors using ion irradiation

E. Montebianco, Y. Sassi, M. Deroo, M. Grelier, M. Drouhin, D. Gouéré, D. Ravelosona

R&D, Spin-Ion Technologies, Ile de France, Palaiseau, France

BR-13. Noise-Robust Method Using Sparsity for Locating a Crack in a Steel Rod Based on the Fourier Coefficients of the Leakage Magnetic Flux

K. Shiku¹, N. Shigematsu², Y. Kuwahara², Y. Gotoh³, T. Nara¹

¹The University of Tokyo, Bunkyo-ku, Japan, ²Neturen Co., Ltd., Hiratsuka Kanagawa, Japan, ³Oita University, Oita-shi, Japan

BIERSTUBE

Tuesday, October 28, 2025

05:00 PM-06:30 PM

Exhibit Hall Events

WOMEN IN MAGNETISM NETWORKING & WINE TASTING EVENT

Tuesday, October 28, 2025

05:00 PM-06:30 PM

Hilton Mezze Patio

XA: COMMEMORATING 50 YEARS OF THE MAGNETIC TUNNEL JUNCTION

Chair(s): T. Santos, *Western Digital, San Jose, California, United States*

Tuesday, October 28, 2025

06:30 PM-08:00 PM

Grand Ballroom

06:30 PM-07:00 PM

XA-01. A Perspective on Magnetic Tunnel Junctions and Tunnel Magnetoresistance – The Journey

J. S. Moodera

Physics, Plasma Science and Fusion Center, MIT, Cambridge, Massachusetts, United States

07:00 PM-07:30 PM

XA-02. Advances in magnetic tunnel junctions for giant tunnel magnetoresistance: Interface engineering and novel materials toward future applications

H. Sukegawa

Research Center for Magnetic and Spintronic Materials, National Institute for Materials Science (NIMS), Tsukuba, Japan

07:30 PM-08:00 PM

XA-03. Perpendicularly magnetized magnetic tunnel junctions for Spin-Transfer-Torque MRAM applications

G. Hu, M. G. Gottwald, C. Safranski, P. L. Trouilloud, L. Rehm, S. Brown, J. Bruley, C. Heinsohn, G. Kim, J. Kim, J. Liang, M. Robbins, P. Hashemi, D. Worledge

IBM T J Watson Research Center, Yorktown Heights, New York, United States

SESSION CA: BEYOND POLYCRYSTALLINE FILMS: TEXTURED MATERIALS FOR HIGH-PERFORMANCE SPINTRONIC DEVICES

Chair(s): P. Khalili Amiri, *Northwestern University, Evanston, Illinois, United States*

Wednesday, October 29, 2025

08:30 AM-12:00 PM

Grand Ballroom

08:30 AM-09:06 AM

CA-01. Integration of highly textured, and epitaxial, materials into 300 mm MRAM manufacturing

S. Mertens¹, M. Ben Chroud¹, X. Piao², K. Sankaran¹, T. Tran¹, N. Jossart¹, A. Palomino Lopez¹, N. Franchina Vergel¹, M. Gama Monteiro¹, S. Rao¹, R. Carpenter¹

¹*imec, Leuven, Belgium*, ²*The Institute for Solid State Physics, University of Tokyo, Kashiwa, Japan*

09:06 AM-09:42 AM

CA-02. Epitaxial magnetic Weyl semimetals for efficient magnetic reading and writing

C. Chou, Z. He, L. Liu

MIT, Cambridge, Massachusetts, United States

09:42 AM-10:18 AM

CA-03. Ultrafast and Chiral Spin Dynamics in Engineered Heusler Architectures: From Synthetic Antiferromagnets to Monolayer Tunnel Junctions

P. C. Filippou

Research, IBM, San Jose, California, United States

10:18 AM-10:54 AM

CA-05. Epitaxial Noncollinear Antiferromagnetic Devices for Microwave Spintronics

S. Nakatsuji

Department of Physics and Astronomy, Johns Hopkins University, Baltimore, Maryland, United States

CA-04. Withdrawn

SESSION CB: FUTURE READ HEAD TECHNOLOGIES

Chair(s): *S. Hernandez, Seagate Technology, Bloomington, Minnesota, United States*

Wednesday, October 29, 2025

08:30 AM-12:00 PM

Ballroom A

08:30 AM-09:06 AM

CB-01. Reader Technology for Ultra-High Capacity HDDs

A. Grier

Seagate Technology, Derry, United Kingdom

09:06 AM-09:42 AM

CB-02. Ultra Narrow Readers – Challenges and Outlook

H. G. Zolla, G. Baiao De Albuquerque, J. L. Grab, J. Liu, C. Yu, J. M. Freitag, I. Andoni, X. Liu, Y. Hong

Western Digital, San Jose, California, United States

09:42 AM-10:18 AM

CB-03. Sub-10 nm Reader Design Using Lateral Spin Valve Structure

R. H. Victora^{1,2}, R. Hao¹

¹*ECE, U. Minnesota, Minneapolis, Minnesota, United States*, ²*Physics, U. Minnesota, Minneapolis, Minnesota, United States*

10:18 AM-10:45 AM

Break

10:45 AM-11:21 AM

CB-04. Tailoring MTJs for future applications: Barrier interfaces engineering and new spinel barrier materials

T. Scheike^{1,2}, H. Sukegawa¹

¹*NIMS, Tsukuba, Ibaraki, Japan*, ²*AIST, Tsukuba, Ibaraki, Japan*

11:21 AM-11:57 AM

CB-05. Potential and challenges of anomalous Hall sensors for future read head technology

T. Nakatani, P. D. Kulkarni, M. Manikketh, R. Toyama, H. Suto, K. Masuda, N. Suwannaharn, T. Sasaki, H. Iwasaki, Y. Sakuraba

National Institute for Materials Science, Tsukuba, Japan

SESSION CC: MAGNETO-TRANSPORT AND MAGNETO-OPTICS OF HIGHER ORDERS IN MAGNETIZATION

Chair(s): T. Kuschel, *Bielefeld University, Bielefeld, Germany*

Wednesday, October 29, 2025

08:30 AM-12:00 PM

Ballroom C

08:30 AM-09:06 AM

CC-01. Angle-dependent magneto-transport of higher order in magnetization

M. Althammer^{1,2}

¹*Walther-Meißner-Institut, Garching, Germany*, ²*TUM School of Natural Sciences, Physics Department, Technical University of Munich, Garching, Germany*

09:06 AM-09:42 AM

CC-02. Quadratic and Cubic Magneto-optic Kerr Effect in Thin Films Depending on Structural Domain Twinning and Crystal Orientation

J. Hamrle^{1,2}, M. Gaerner⁴, R. Silber³, M. Schäffer⁴, M. Veis¹, T. Kuschel⁴

¹*Faculty of Mathematics and Physics, Charles University, Prague, Czechia*, ²*Faculty of Nuclear Sciences and Physical Engineering, Czech Technical University, Prague, Czechia*, ³*Department of Materials Engineering and Recycling, VSB - Technical University of Ostrava, Ostrava, Czechia*, ⁴*Faculty of Physics, Bielefeld University, Bielefeld, Germany*

09:42 AM-10:18 AM

CC-03. Magneto-optical-Kerr-effect measurement of spin-orbit torques with two magnetic layers

X. Fan

University of Denver, Denver, Colorado, United States

10:18 AM-10:45 AM

Break

10:45 AM-11:21 AM

CC-04. Application of Q-MOKE in Magnetometry

E. Schmoranzarová, Z. Sadeghi, V. Wohlrath, J. Kimák, P. Kubascik, L. Nadvornik, P. Nemeč, T. Ostatnický

Department of Chemical Physics and Optics, Charles University, Prague, Czechia

11:21 AM-11:57 AM

CC-05. Multipolar Anisotropy in Anomalous Hall Effect from Spin-Group Symmetry Breaking

Z. Liu¹, M. Wei¹, D. Hou², Y. Gao¹, Q. Niu¹

¹*Department of Physics, University of Science and Technology of China, Hefei, Anhui, China*, ²*University of Science and Technology of China, Hefei, Anhui, China*

SESSION CD: MAGNETOELECTRIC AND MULTIFERROICS II

Chair(s): S. Husain, *Material Science and Engineering, University of California, Berkeley, Berkeley, California, United States*

Wednesday, October 29, 2025

08:30 AM-12:00 PM

Ballroom B

08:30 AM-09:06 AM

CD-01. Magneto-Ionic Vortices: Paving the Way for Secure, Reconfigurable and Energy-Efficient Devices

I. Spasojević¹, Z. Ma¹, A. Barrera², F. Celegato³, A. Magni³, S. Ruiz Gómez⁴, M. Foerster⁴, A. Palau², P. Tiberto³, K. Buchanan⁵, J. Sort¹

¹Physics Department, Autonomous University of Barcelona, Bellaterra, Barcelona, Spain, ²Instituto de Ciencia de Materiales de Barcelona (ICMAB), Bellaterra, Spain, ³Advanced Materials and Life Science Division, Istituto Nazionale di Ricerca Metrologica, Torino, Italy, ⁴ALBA Synchrotron, Cerdanyola del Vallès, Spain, ⁵Physics Department, Colorado State University, Fort Collins, Colorado, United States

09:06 AM-09:18 AM

CD-03. Boosting magneto-ionics in Ta/CoFeB/Pt/MgO/HfO₂ by interfacial atomic intermixing through Ne⁺ irradiation

S. Chen^{1,2,7}, E. Monteblando², M. Deroo², Z. Ma³, A. Cataldo⁴, A. Lamperti⁴, A. Solignac⁵, S. Ono⁶, E. Menéndez³, J. Sort³, D. Ravelosona²

¹Centre de Nanosciences et de Nanotechnologies, Palaiseau, France, ²Spin-Ion Technologies, Palaiseau, France, ³Departament de Física, Universitat Autònoma de Barcelona, Cerdanyola del Vallès, Spain, ⁴IMM-CNR, Agrate Brianza, Italy, ⁵Institut Rayonnement-Matière de Saclay, CEA-Saclay, Gif-sur-Yvette, France, ⁶International Center for Synchrotron Radiation Innovation Smart, Tohoku University, Sendai, Japan, ⁷Hangzhou International Innovation Institute, Beihang University, Hangzhou, China

09:18 AM-09:30 AM

CD-04. Exploring the Full Magneto-ionic Oxidation Spectrum in Pt/CoFeB/HfO₂

I. Benguettat- El Mokhtari¹, R. Pachat¹, V. Poree², A. Lamperti³, Y. Roussigné⁴, M. Syskaki⁵, J. Wrona⁵, G. Bernard¹, A. Cataldo^{3,6}, A. Resta², A. Nicolau², S. Ono⁷, S. Cherif⁴, J. Langer⁵, D. Ravelosona¹, M. Belmeguenai⁴, A. Solignac⁸, L. H. Diez¹

¹Centre de Nanosciences et de Nanotechnologies, CNRS, Université Paris-Saclay, Palaiseau, France, ²Synchrotron SOLEIL, Saint-Aubin, France, ³CNR-IMM, Agrate Brianza, Italy, ⁴Laboratoire des Sciences des Procédés et des Matériaux, CNRS-UPR, Villetaneuse, France, ⁵Singulus Technologies AG, Kahl am Main, Germany, ⁶Department of Chemistry, Materials and Nanotechnology, Politecnico di Milano, Milan, Italy, ⁷Central Research Institute of Electric Power Industry, Kanagawa, Japan, ⁸SPEC, CEA, CNRS, Gif-sur-Yvette Cedex, France

09:30 AM-09:42 AM

CD-05. Theoretical and experimental investigation of magnetic order in Mn₂PtIn

C. Sadler¹, M. Pulse², A. Venner², M. Anas², P. Kharel², P. Shand¹, P. Lukashev¹

¹Physics, University of Northern Iowa, Cedar Falls, Iowa, United States, ²South Dakota State University, Brookings, South Dakota, United States

09:42 AM-09:54 AM

CD-06. Scale-dependent thermodynamic control of metal-insulator transition in La_{0.67}Sr_{0.33}MnO₃

I. Bhaduri^{1,2}, S. Snijder¹, T. Banerjee^{1,2}

¹Zernike Institute for Advanced Materials, University of Groningen, Groningen, Netherlands, ²Groningen Cognitive Systems and Materials Center, University of Groningen, Groningen, Netherlands

09:54 AM-10:06 AM

CD-09. Voltage-driven fluorine motion for novel organic spintronic memristor

Y. Lu¹, A. Nachawaty¹, T. Chen¹, F. Ibrahim², Y. Wang³, Y. Hao¹, K. Francesca⁴, P. Tyagi¹, A. Da Costa⁴, A. Ferri⁴, C. Liu³, X. Li³, M. Chshiev², S. Migot¹, L. Badie¹, W. Jahjah⁵, R. Desfeux⁴, J. Le Breton⁵, P. Schieffer⁵, A. Le Pottier⁵, T. Gries¹, X. Devaux¹

¹Institut Jean Lamour, Nancy, France, ²SPINTEC, Grenoble, France, ³University of Science and Technology of China, Hefei, China, ⁴Univ. Artois, Lens, France, ⁵Univ. Rennes, Rennes, France

10:06 AM-10:42 AM

CD-08. Tailoring Magnetic Spin Textures in La_{0.7}Sr_{0.3}MnO₃-based Micromagnets

D. Sasaki^{2,1}, B. Achinuq², T. Sahoo¹, I. Nihal¹, E. Teano¹, M. Frame¹, I. Snowden¹, S. Retterer³, Y. Takamura¹

¹Materials Science and Engineering, University of California, Davis, Davis, California, United States, ²Advanced Light Source, Lawrence Berkeley National Laboratory, Berkeley, California, United States, ³Center for Nanophase Materials Sciences, Oak Ridge National Laboratory, Oak Ridge, Tennessee, United States

10:42 AM-10:54 AM

CD-10. Energy-Efficient Control of Probabilistic Switching in sMTJs via Voltage-Controlled Exchange Coupling: Experiment and Simulation *

Q. Jia^{1*}, O. Benally¹, B. Zink¹, D. Zhang¹, Y. Lv¹, S. Liang¹, D. Lyu¹, Y. Chen¹, Y. Yang¹, Y. Huang², J. Wang¹

¹University of Minnesota, Minneapolis, Minnesota, United States, ²National Yang Ming Chiao Tung University, Hsinchu, Taiwan

SESSION CE: ALTERMAGNETISM & ANTIFERROMAGNETISM - THIN FILMS AND OTHER SYSTEMS

Chair(s): R. Gupta, *Institute of Physics, University of Gothenburg, Gothenburg, Sweden*

Wednesday, October 29, 2025

08:30 AM-12:00 PM

Room 2DE

08:30 AM-09:06 AM

CE-01. Collective excitations in altermagnetic α -MnTe

A. De la Torre Duran

Northeastern University, Burlington, Massachusetts, United States

09:06 AM-09:18 AM

CE-03. Magnetoelastic stabilization of 180° domain walls in a collinear antiferromagnet

A. Koziol Rachwal¹, M. Szpytma¹, P. Drozd¹, E. Madej², D. Wilgocka-Slezak², A. Kwiatkowski¹, E. Oles¹, M. Slezak¹, T. Slezak¹

¹AGH University of Krakow, Krakow, Poland, ²Jerzy Haber Institute of Catalysis and Surface Chemistry Polish Academy of Sciences, Krakow, Poland

09:18 AM-09:30 AM

CE-04. Two-dimensional antiferromagnets with non-relativistic spin splitting switchable by electric polarization

H. Mavani, K. Huang, K. Samanta, E. Y. Tsymbal

Department of Physics and Astronomy, University of Nebraska, Lincoln, Lincoln, Nebraska, United States

09:30 AM-10:06 AM

CE-05. Structure and Magnetotransport in Altermagnetic MnTe Thin Films

S. Bey¹, M. Zhukovskiy³, T. Orlova³, S. Fields², V. Lauter⁴, H. Ambaye⁴, A. Ievlev⁵, S. P. Bennett², X. Liu¹, B. A. Assaf¹

¹Physics and Astronomy, The University of Notre Dame, Notre Dame, Indiana, United States, ²Materials Science and Technology Division, U.S. Naval Research Laboratory, Washington, District of Columbia, United States, ³Integrated Imaging Facility, The University of Notre Dame, Notre Dame, Indiana, United States, ⁴Neutron Sciences Directorate, Oak Ridge National Laboratory, Oak Ridge, Tennessee, United States, ⁵Center for Nanophase Materials Science, Oak Ridge National Laboratory, Oak Ridge, Tennessee, United States

10:06 AM-10:45 AM

Break

10:45 AM-11:21 AM

CE-06. Probing altermagnetic band splitting and magnetic order in epitaxial CrSb thin films

N. Samarth^{1,2}

¹Dept. of Physics and Dept. of Materials Science and Engineering, The Pennsylvania State University, University Park, Pennsylvania, United States, ²Argonne National Lab, Lemont, Illinois, United States

11:21 AM-11:33 AM

CE-07. Robust Biaxial Anisotropy and Electrical Switching of LaFeO₃ Epitaxial Thin Films

J. Lanier, J. Michel, D. Russell, J. Flores, B. Liu, J. Hwang, E. Yang

The Ohio State University, Columbus, Ohio, United States

11:33 AM-11:45 AM

CE-08. High-temperature anomalous Hall and magnetoresistance effects driven by frustrated spin fluctuations in the antiferromagnetic metallic delafossite PdCrO₂

Y. Tao¹, P. Jain¹, Y. Zhang¹, F. Tutt¹, D. Phelan², C. Balz³, S. Hatt⁴, E. Zappala⁴, J. Neufeind³, S. Rosenkranz², B. Frandsen⁴, C. Leighton¹

¹University of Minnesota, Minneapolis, Minnesota, United States, ²Argonne National Lab, Argonne, Illinois, United States, ³Oak Ridge National Lab, Oak Ridge, Tennessee, United States, ⁴Brigham Young University, Provo, Utah, United States

11:45 AM-11:57 AM

CE-09. Nanoscale Magnetic Structure Imaging of an Atomically Thin 2D Antiferromagnet

J. Katoch¹, A. Tiwari¹, A. Smekhova², S. Patil², R. Bandapelli¹, Z. Cui¹, I. Kao¹, R. Posti¹, F. Kronast², S. Singh¹

¹Physics, Carnegie Mellon University, Pittsburgh, Pennsylvania, United States, ²Helmholtz-Zentrum Berlin für Materialien und Energie, Albert-Einstein-Straße, Berlin, Germany

SESSION CF: LOW-DIMENSIONAL SYSTEMS, MOLECULAR AND ORGANIC MAGNETS

Chair(s): J. Hanson-Flores, *Physics, University of Central Florida, Orlando, Florida, United States*

Wednesday, October 29, 2025

08:30 AM-12:00 PM

Room 2BC

08:30 AM-09:06 AM

CF-01. Quantum and Nonlinear Magnonics

G. Fuchs

Applied and Engineering Physics, Cornell University, Ithaca, New York, United States

09:06 AM-09:18 AM

CF-02. Low-Lying Excitations, Magnetic Irreversibilities and Griffith's Phase in Quasi-two-dimensional Manganite

M. Verma, Y. Bitla

Physics, Central University of Rajasthan, Ajmer, Rajasthan, India

09:18 AM-09:30 AM

CF-03. Enhanced Coercivity and Spin-Glass Behavior in SiO₂-Coated Fe₅C₂ Nanorods

P. Joshi¹, H. Abbas¹, T. Karki¹, J. Mohapatra¹, X. Liu², P. Liu¹

¹Physics, The University of Texas at Arlington, Arlington, Texas, United States, ²Ames Laboratory, Critical Materials Institute, Ames, Iowa, United States

09:30 AM-09:42 AM

CF-04. Field-induced breathing magnetic domain wall at ferromagnetic nanowires

S. Ahn

Postech, Pohang, Korea (the Republic of)

09:42 AM-10:18 AM

CF-05. Electron Spin Resonance Measurement of a Single Molecule Magnet Terbium Phthalocyanine (TbPc₂) Using Scanning Tunneling Microscopy

T. Komeda

Tohoku University, Sendai, Japan

10:18 AM-10:45 AM

Break

10:45 AM-10:57 AM

CF-06. Development and Characterization of Magnetite Reinforced Nanocomposites for Electromagnetic Responsiveness and Smart Material Applications

D. Di Napoli, S. Vattathurvalappil

Aerospace Engineering, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia

10:57 AM-11:09 AM

CF-07. Integrated Numerical and SAXS Investigation of Ultra-Small SPIONs Magnetophoresis and Separation in High Field and Gradient Fields

X. Wu¹, H. Choe¹, P. Iyer¹, B. Yunker¹, I. H. Karampelas², K. Wu³, J. Chalmers¹, J. Gomez-Pastora³

¹The Ohio State University, Columbus, Ohio, United States, ²Nemak, Sheboygan, Wisconsin, United States, ³Texas Tech University, Lubbock, Texas, United States

11:09 AM-11:21 AM

CF-09. Efficient Fe₃O₄@CuS nanocomposites for enhanced removal of organic dyes from wastewater

J. Gupta^{2,1}, K. C. Barick¹

¹Chemistry Division, Bhabha Atomic Research Centre, Navi Mumbai, Maharashtra, India, ²School of Advanced Sciences and Languages, VIT Bhopal University Bhopal, Sehore, Madhya Pradesh, India

11:21 AM-11:33 AM

CF-10. Emergence of the Verwey Transition in Fe₅C₂@Fe₃O₄ Core-Shell Nanocrystals Below 5 nm Thickness

H. Abbas, J. Mohapatra, P. Joshi, T. Karki, P. Liu

Physics, The University of Texas at Arlington, Arlington, Texas, United States

11:33 AM-11:45 AM

CF-11. Magnetic Properties of Fe₃O₄ Membranes Transferred from a SrTiO₃ substrate by Etching a BaO Sacrificial Layer

D. Matsubara¹, T. Takeda², M. Tanaka^{1,3,4}, S. Ohya^{1,3,4}

¹Department of Electrical Engineering and Information Systems, The University of Tokyo, Bunkyo-ku, Tokyo, Japan, ²Department of Chemical System Engineering, The University of Tokyo, Bunkyo-ku, Tokyo, Japan, ³Center for Spintronics Research Network (CSRN), The University of Tokyo, Bunkyo-ku, Tokyo, Japan, ⁴Institute for Nano Quantum Information Electronics, The University of Tokyo, Bunkyo-ku, Tokyo, Japan

SESSION CG: MAGNETIC MICROSCOPY AND IMAGING

Chair(s): J. Fullerton, *Argonne National Laboratory, Lemont, Illinois, United States*

Wednesday, October 29, 2025

08:30 AM-12:00 PM

Room 2A

08:30 AM-08:42 AM

CG-01. Scanning NV magnetometry in a closed-cycle cryostat

M. Bacani¹, C. Schäfermeier¹, G. Puebla-Hellmann², J. Rhensius², K. Karrai¹, A. Morales²

¹*attocube systems GmbH, Haar by Munich, Germany*, ²*QZabre AG, Zurich, Switzerland*

08:42 AM-08:54 AM

CG-02. Spin structure imaging with ptychography in antiferromagnetic CuMnAs

D. M. Burn¹, K. Edmonds², P. Wadley², C. Parmenter³, R. Campion², B. Daurer¹, S. S. Dhesi¹

¹*Diamond Light Source, Didcot, Oxfordshire, United Kingdom*, ²*School of Physics and Astronomy, University of Nottingham, Nottingham, United Kingdom*, ³*Nanoscale and Microscale Research Centre, University of Nottingham, Nottingham, United Kingdom*

08:54 AM-09:06 AM

CG-03. Magnetic Patterning By Light He⁺ Ion Irradiation For New Generation Reference Samples

Y. Sassi¹, K. Bouzehouane², A. Finco³, S. Collin², F. Godel², N. Reyren², V. Cros², E. Montebianco¹, D. Ravelosona¹

¹*Spin-Ion Technologies, Centre de Nanosciences et Nanotechnologies (C2N), Palaiseau, France*, ²*Laboratoire Albert Fert, CNRS, Thales, Université Paris-Saclay, 1 avenue Augustin-Fresnel, Palaiseau, France*, ³*Laboratoire Charles Coulomb, Université de Montpellier, CNRS, Montpellier, France*

09:06 AM-09:18 AM

CG-04. A Sensitive MOKE and Optical Hall Effect Technique at Visible Wavelengths: Insights Into The Gilbert Damping

N. Am-Shalom, N. Bernstein, B. J. Assouline, A. Capua

Institution of Electrical Engineering and Applied Physics, The Hebrew University of Jerusalem, Jerusalem, Israel

09:18 AM-09:30 AM

CG-05. 3D Vector Ptycho-Tomographic Imaging of Topological Structures in FeGd Multilayer

I. Binnie¹, H. Fang¹, B. Shearer¹, T. Feggeler^{5,4}, A. Oh^{6,7}, S. Yazdi¹, E. Cating-Subramanian¹, S. Montoya², E. Fullerton², D. Shapiro⁴, J. Miao³, H. C. Kapteyn¹, M. M. Murnane¹

¹*University of Colorado Boulder, Boulder, Colorado, United States*, ²*University of California San Diego, San Diego, California, United States*, ³*University of California, Los Angeles, Los Angeles, California, United States*, ⁴*Lawrence Berkeley National Lab, Berkeley, California, United States*, ⁵*Brookhaven National Lab, Upton, New York, United States*, ⁶*Vanderbilt University, Nashville, Tennessee, United States*, ⁷*Columbia University, New York, New York, United States*

09:30 AM-09:42 AM

CG-06. Unveiling Hidden Spatio-Magnetic Phases in Quantum Materials through Quantitative Magnetic Imaging and Transport*

M. Sim^{1*}, G. Krishnaswamy¹, G. Ji Omar¹, M. Pardo-Almanza², Y. Fujisawa², X. Chen³, H. Tan³, Y. Okada², A. Ariando¹, A. Soumyanarayanan^{1,3}

¹*Department of Physics, National University of Singapore (NUS), Singapore, Singapore*, ²*Quantum Materials Science Unit, Okinawa Institute of Science and Technology (OIST), Okinawa, Japan*, ³*Institute of Materials Research and Engineering (IMRE), A*STAR, Singapore, Singapore*

09:42 AM-10:18 AM

CG-07. Probing Magnon Dynamics with Microwave-Based Ultrafast Electron Microscopy

C. Liu, S. Reisbick, Y. Zhu

Condensed Matter Physics, Brookhaven National Lab, Upton, New York, United States

10:18 AM-10:45 AM

Break

10:45 AM-10:57 AM

CG-09. 3D spin wave microscopy

K. Rivkin

RKMAG Corporation, Pacific Grove, California, United States

10:57 AM-11:09 AM

CG-10. Mechanochemical Synthesis of Strontium Hexaferrite Magnets from Mill Scale Waste

N. Gunduz Akdogan^{1,3}, D. Kalkavan¹, D. Celebi^{1,2}, O. Akdogan^{1,2}

¹NANOTerial Technology Co., Istanbul, Turkey, ²Bahcesehir University, Istanbul, Turkey, ³Piri Reis University, Istanbul, Turkey

11:09 AM-11:45 AM

CG-11. Nanoscale imaging and control of altermagnetism in MnTe

O. Amin¹, A. Dal Din¹, E. Golias², Y. Niu², A. Zakharov², S. Fromage¹, C. Fields^{1,3}, S. Heywood¹, R. Cousins⁴, F. Maccherozzi³, J. Krempaský⁵, H. Dil^{6,5}, D. Kriegner⁷, B. Kiraly¹, R. Campion¹, A. Rushforth¹, K. Edmonds¹, S. S. Dhesi³, L. Šmejkal^{8,9,10}, T. Jungwirth^{7,1}, P. Wadley¹

¹University of Nottingham, Nottingham, United Kingdom, ²MAX IV Laboratory, Lund, Sweden, ³Diamond Light Source, Didcot, United Kingdom, ⁴Nanoscale and Microscale Research Centre, Nottingham, United Kingdom, ⁵Photon Science Division, Paul Scherrer Institut, Villigen, Switzerland, ⁶Institut de Physique, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland, ⁷Institute of Physics, Czech Academy of Sciences, Prague, Czechia, ⁸Max Planck Institute for the Physics of Complex Systems, Dresden, Germany, ⁹Max Planck Institute for Chemical Physics of Solids, Dresden, Germany, ¹⁰Institute of Physics, Johannes Gutenberg University, Mainz, Germany

SESSION CH: FAST AND EFFICIENT SWITCHING

Co-Chair(s): X. Fan, *Division of Natural Sciences and Mathematics, University of Denver, Denver, Colorado, United States* and S. Sugimoto, *Research Center for Magnetic and Spintronic Materials, National Institute for Materials Science, Tsukuba, Japan*

Wednesday, October 29, 2025

08:30 AM-12:00 PM

Room 1BC

08:30 AM-09:06 AM

CH-01. Ultrafast Creation of Magnetization Through the Targeted Excitation of Circularly-polarized Phonons

T. Zalewski^{1,2}, A. V. Boris³, A. Kirilyuk^{1,2}, C. S. Davies^{1,2}

¹HFML-FELIX, Radboud University, Nijmegen, Netherlands, ²Institute for Molecules and Materials, Radboud University, Nijmegen, Netherlands, ³Max Planck Institute for Solid State Research, Stuttgart, Germany

09:06 AM-09:18 AM

CH-03. Strain-Assisted Magnetization Reversal in Nanomagnets

S. Sarker¹, M. F. Chowdhury¹, M. J. Gross⁵, M. Rajib¹, P. S. Keatley⁶, R. Hicken⁵, C. A. Ross⁴, J. Atulasimha^{1,2}

¹Mechanical & Nuclear Engineering Department, Virginia Commonwealth University, Richmond, Virginia, United States, ²Electrical & Computer Engineering Department, Virginia Commonwealth University, Richmond, Virginia, United States, ³Department of Physics and Astronomy, University of Exeter, Exeter, United Kingdom, ⁴Department of Materials Science and Engineering, Massachusetts Institute of Technology, Boston, Massachusetts, United States, ⁵Electrical Engineering and Computer Science Department,

Massachusetts Institute of Technology, Boston, Massachusetts, United States, ⁶Electromagnetic and Acoustic Materials Department, University of Exeter, Exeter, United Kingdom

09:18 AM-09:30 AM

CH-04. Origin of Enhanced Switching Efficiency by Increasing Magnetic Anisotropy Field in Accelerated STT-Switching and High-Retention MTJ (AccelHR-MTJ)

S. Itai, K. Koi, H. Maekawa, R. Takashima, M. Toko, Y. Lee, M. Nakayama
Frontier Technology R&D Institute, KIOXIA Corporation, Yokohama, Japan

09:30 AM-09:42 AM

CH-05. Magnetostrictive Fe_(100-x)Al_x thin films on Flexible Substrates: correlation between microstructural and magneto-dynamic properties

P. Kumar^{1,2}, P. Kumar¹, V. Sharma³, M. K. Khanna⁴, B. K. Kuan¹

¹Special Centre for Nanoscience, Jawaharlal Nehru University, New Delhi, Delhi, India, ²Department of Physics, Motilal Nehru College, University of Delhi, South Campus, New Delhi, Delhi, India, ³Department of Physics, Northeastern University, Boston, Massachusetts, United States, ⁴Department of Electronic Science, University of Delhi, South Campus, New Delhi, Delhi, India

09:42 AM-09:54 AM

CH-06. Pt-Transition Metal Synthetic Ferrimagnets for All Optical Switching

J. Scott¹, M. Dabrowski², C. Sait², W. R. Hendren¹, N. Kuninski¹, T. E. McCormack¹, D. M. Burn³, D. G. Newman², P. S. Keatley², A. T. N'Diaye⁴, T. Hesjedal⁵, G. van der Laan³, R. Hicken², R. M. Bowman¹

¹Queen's University Belfast, Belfast, United Kingdom, ²University of Exeter, Exeter, United Kingdom, ³Diamond Light Source, Didcot, United Kingdom, ⁴Lawrence Berkeley National Laboratory, Berkeley, California, United States, ⁵University of Oxford, Oxford, United Kingdom

09:54 AM-10:06 AM

CH-07. Tracking and Characterization of Domains in Nd₂Fe₁₄B Micro-Magnets

F. Lasthofer¹, O. Hrushko¹, A. Kosogor¹, T. Schrefl¹, S. Raznjevic², K. Zuzek Rozman², V. Sršan², S. Šturm²

¹University for Continuing Education Krems, Wr. Neustadt, Austria, ²Jozef Stefan Institute, Ljubljana, Slovenia

10:06 AM-10:18 AM

CH-08. Self-modulation instability in high-power ferromagnetic resonance of BiYIG nanodisks

I. N. Yemeli¹, S. Perna², D. Gouéré⁴, A. Kolli¹, M. Muñoz³, A. Anane⁴, M. d'Aquino², H. Merbouche¹, C. Serpico², G. de Loubens¹

¹SPEC, CEA, CNRS, Université Paris-Sarclay, Gif-sur-Yvette, Paris, France, ²Department of Electrical Engineering and Information Technology, University of Naples Federico II, Naples, Italy, ³Instituto de Tecnologías Físicas y de la Información (CSIC), Madrid, Spain, ⁴Laboratoire Albert Fert, CNRS, Thales, Université Paris-Sarclay, Palaiseau, France

10:18 AM-10:45 AM

Break

10:45 AM-10:57 AM

CH-09. A Physically Unclonable Function Implemented with Defective Magnetic Tunnel Junctions

J. W. Huber¹, R. Rahman², S. Bandyopadhyay¹

¹Electrical and Computer Engineering, Virginia Commonwealth University, Richmond, Virginia, United States, ²Electrical and Computer Engineering, Virginia Commonwealth University, Richmond, Virginia, United States

10:57 AM-11:09 AM

CH-10. Exploring Low Sheet Resistance Materials for Enhanced Ferromagnetic Resonance Signals

N. Kuninski, J. N. Scott, W. R. Hendren, T. E. McCormack, R. M. Bowman

CQMT, Queen's University Belfast, Belfast, United Kingdom

11:09 AM-11:21 AM

CH-11. The role of the magnetic part of the optical field in the optical control of the magnetization

B. J. Assouline, A. Capua

Applied Physics, Hebrew University of Jerusalem, Jerusalem, Jerusalem, Israel

SESSION CQ: BIOMAGNETISM AND BIOMEDICAL APPLICATIONS II (POSTER SESSION)

Co-Chair(s): P. Kumar, *IMS RIKEN Center for Integrative Medical Sciences, Yokohama, Japan* and D. A. Arena, *Physics, University of South Florida, Tampa, Florida, United States*

Wednesday, October 29, 2025

09:00 AM-12:00 PM

Exhibit Hall Posters

CQ-01. Application of the FDTD Method to Analysis of Light Scattering in Suspensions of Crystals with Magnetic Anisotropy

Y. Takeuchi¹, T. Yamada¹, H. Kawaguchi¹, A. Hamasaki²

¹*Muroran Institute of Technology, Muroran, Japan*, ²*Faculty of science, Shinshu University, Matsumoto, Japan*

CQ-02. Temperature-Dependent Agglomeration Dynamics of Magnetic Nanoparticles: Implications for Diffusion and Spatial Control in Magnetic Hyperthermia

B. Cheng, J. Sakurai, S. Hata, C. Oka

Micro-Nano Mechanical Science and Engineering, Nagoya University, Nagoya, Aichi-ken, Japan

CQ-03. Automated TMS E-Field Mapping of Brain Phantom using Collaborative Robot

L. Schorr¹, W. Lohr², R. L. Hadimani¹

¹*Mechanical and Nuclear Engineering, Virginia Commonwealth University, Richmond, Virginia, United States*, ²*Biomedical Engineering, Virginia Commonwealth University, Richmond, Virginia, United States*

CQ-04. Shape-Directed Magnetic and Hyperthermic Properties of Hydrothermally Synthesized Mn_{0.5}Zn_{0.5}Fe₂O₄-based Magnetic Fluid

H. H. Patel¹, K. Parekh¹, P. Kopcansky², M. Rajnak²

¹*Dr. K. C. Patel Research and Development Centre, Charotar University of Science and Technology, CHARUSAT Campus, Changa, Gujarat, India*, ²*Institute of Experimental Physics, SAS, Watsonova 47, 040 01, Košice, Slovakia*

CQ-05. Wireless Temperature Measurement based on Magnetic Harmonic Signal during Magnetic Heating Operation for Hyperthermia

A. Kuwahata, A. Yamazaki, R. Shinohara, S. Yabukami

Tohoku University, Sendai, Japan

CQ-06. Iron Oxide Magnetic Nanoparticles Synthesized by Wet Ball Milling: Evaluation of Hyperthermia Properties

S. Mostufa¹, B. Rezaei¹, I. H. Karampelas², J. Gomez-Pastora³, K. Wu¹

¹*Department of Electrical and Computer Engineering, Texas Tech University, Lubbock, Texas, United States*, ²*Nemak USA, Inc., Sheboygan, Wisconsin, United States*, ³*Department of Chemical Engineering, Texas Tech University, Lubbock, Texas, United States*

CQ-07. PEG-Functionalized Spherical and Cubic Iron Oxide Nanoparticles for Magnetic Hyperthermia in Serum-Based Environments

B. Rezaei¹, S. Mostufa¹, I. H. Karampelas², J. Gomez-Pastora³, K. Wu¹

¹*Department of Electrical and Computer Engineering, Texas Tech University, Lubbock, Texas, United States*, ²*Nemak USA, Inc., Sheboygan, Wisconsin, United States*, ³*Department of Chemical Engineering, Texas Tech University, Lubbock, Texas, United States*

CQ-08. Magnetic Orientation of Monosodium Urate Crystals in Microspaces: Implications for Gout Diagnosis

A. Hamasaki¹, Y. Takeuchi²

¹Faculty of science, Shinshu University, Matsumoto, Japan, ²Muroran Institute of Technology, Muroran, Japan

CQ-09. Anatomical and Conductive Rhesus Macaque Head Phantom for E-field sensing in Transcranial Magnetic Stimulation.

W. Lohr¹, T. Atalugama², M. Basker², R. L. Hadimani²

¹Biomedical Engineering, Virginia Commonwealth University, Richmond, Virginia, United States, ²Mechanical and Nuclear Engineering, Virginia Commonwealth University, Richmond, Virginia, United States

SESSION CR: SOFT MAGNETIC MATERIALS II (POSTER SESSION)

Chair(s): N. Alatawneh, Sacred Heart University, Trumbull, Connecticut, United States

Wednesday, October 29, 2025

09:00 AM-12:00 PM

Exhibit Hall Posters

CR-01. Analysis of Domain Wall Pinning and Anomalous Eddy Current Losses via Multiscale Magnetic Simulations

Y. Shima¹, T. Yamazaki¹, S. Tamaru², C. Mitsumata³, A. L. Foggiatto¹, M. Kotsugi¹

¹Department of Materials Science and Technology, Tokyo University of Science, Tokyo, Japan, ²National Institute of Advanced Industrial Science and Technology, Tsukuba, Ibaraki, Japan, ³University of Tsukuba, Tsukuba, Ibaraki, Japan

CR-02. Ab initio study of promising antiferromagnetic aluminides for magnetocaloric applications

H. Aihemaiti¹, E. Dastanpour¹, A. Bergman², L. Vitos^{1,2}

¹Material Science and Engineering, KTH Royal Institute of Technology, Stockholm, Sweden, ²Department of Physics and Astronomy, Uppsala university, Uppsala, Sweden

CR-03. Influence of Annealing Treatment on Magnetic Properties of Submicron Sized Amorphous Fe-Co-B Particles

K. Sato¹, K. Wakabayashi¹, S. Aja¹, T. Miyazaki¹, S. Muroga¹, Y. Endo^{1,2}

¹Graduate School of Engineering, Tohoku University, Sendai, Miyagi, Japan, ²Center for Science and Innovation in Spintronics, Tohoku University, Sendai, Miyagi, Japan

CR-04. 120 °C Si-O insulating shell formation on iron nanoparticles synthesized from micron-size magnetite by gas-solid reaction

A. Nishikura, M. Miyazawa, H. Nakashinden, M. Tobise, S. Saito

Tohoku University, Sendai, Japan

CR-05. Additive manufacturing of soft ferrite components

B. Capraro¹, S. Bachmann², R. Wachs², H. Lauterbach³, O. Horst³

¹Fraunhofer Institute for Ceramic Technologies and Systems IKTS, Hermsdorf, Thuringia, Germany, ²Tridelta Weichferrite GmbH, Hermsdorf, Thuringia, Germany, ³QSIL Metals Hermsdorf GmbH, Hermsdorf, Thuringia, Germany

CR-06. Research on High Thrust Density Permanent Magnet Vernier Linear Electric Machine for Gravity Energy Storage Systems Based on High Saturation Magnetic Flux Density Materials

J. Yuan, Q. Wu, H. Zhou

School of Electrical Engineering and Automation, Wuhan University, Wuhan, China

CR-07. Giant Magnetization and Low Anisotropy in Zn-Doped Cobalt ferrite

F. Bakhshizadeh¹, F. Efe¹, D. Alharbi^{1,2}, M. Guy¹, M. Davis¹, A. Lisfi¹

¹Physics, Morgan State University, Baltimore, Maryland, United States, ²Physics, The Catholic University of America, Washington DC, District of Columbia, United States

CR-08. Magnetostriction of Iron-Based Binary Alloys

T. Fukuzaki, T. Inoue, T. Kanematsu, T. Yoshimoto

Nidec Product Technology R&D Center, NIDEC CORPORATION, Kawasaki, Kanagawa, Japan

CR-09. Magnetometry of Buried Nanolayers by Hard X-ray Photoelectron Spectroscopy

A. Hloskovsky¹, C. Schlueter¹, G. Fecher²

¹*Photon Science, DESY, Hamburg, Germany*, ²*Max Planck Institute for Chemical Physics of Solids, Dresden, Germany*

CR-10. Fabrication and Evaluation of Magnetic anisotropy of Co-based Heusler alloy $\text{Co}_2\text{FeAl}_x\text{Si}_{1-x}$ epitaxial thin films

T. Hojo^{1,2}, H. Hamasaki², M. Tsunoda^{3,4}, M. Oogane^{2,5}

¹*Department of Advanced Spintronics Medical Engineering, Graduate School of Engineering, Tohoku University, Sendai, Miyagi, Japan*, ²*Department of Applied Physics, Graduate School of Engineering, Tohoku University, Sendai, Miyagi, Japan*, ³*Department of Electronic Engineering, Graduate School of Engineering, Tohoku University, Sendai, Miyagi, Japan*, ⁴*Research Center for Green X-Tech, Green Goals Initiative, Tohoku University, Sendai, Miyagi, Japan*, ⁵*Center for Science and Innovation in Spintronics (Core Research Cluster) Organization for Advanced Studies, Tohoku University, Sendai, Miyagi, Japan*

CR-11. Enhancement of microwave absorption and resonance linewidth through large specific surface area of magnesium substituted Zn-Ni Ferrites

S. Kaushik¹, M. Dabla¹, P. Kumar¹, M. Sharma^{1,2}, B. K. Kuanr¹

¹*Special Centre for Nanoscience, Jawaharlal Nehru University, New Delhi, Delhi, India*, ²*Department of Physics, Deshbandhu College, University of Delhi, New Delhi, Delhi, India*

CR-12. Normalized switching field distribution for the thin film of Co

J. Hidalgo Gonzalez¹, S. P. Sánchez¹, A. E. Oropesa¹, J. Matutes²

¹*Universidad Autonoma de San Luis Potosí, San Luis Potosí, Mexico*, ²*Centro de Investigación en Materiales Avanzados, Chihuahua, Chihuahua, Mexico*

CR-13. Exploring Interfacial Effects in Transition Metal Dichalcogenide / Ferrimagnetic Alloy Heterostructure

L. Ramos, D. A. Arena, A. I. Ojo, H. Rodríguez Gutiérrez, Y. Wadumesthri

Physics, University of South Florida, Tampa, Florida, United States

CR-14. Epitaxial CoFeMnGe Thin Films with Low Gilbert Damping: A Promising Quaternary Heusler Alloy for Spintronics

R. Roy Chowdhury, V. Mishra, A. I. Ojo, R. Huligerepura Shankaregowda, P. Sharma, D. DeTellem, H. Srikanth, D. A. Arena, S. Witanachchi, M. Phan

Department of Physics, University of South Florida, Tampa, Florida, United States

WORKSHOP: WOMEN IN MAGNETISM

Wednesday, October 29, 2025

12:15 PM-01:45 PM

Room 1DE

SESSION DA: PERSPECTIVE OF PROBABILISTIC COMPUTING WITH MAGNETIC TUNNEL JUNCTIONS

Chair(s): G. Finocchio, *University of Messina, Messina, Italy*

Wednesday, October 29, 2025

02:00 PM-05:30 PM

Grand Ballroom

02:00 PM-02:36 PM

DA-01. Advanced Designs of Stochastic Magnetic Tunnel Junctions for Spintronic Probabilistic Computing

S. Kanai^{1, 2, 3}

¹Laboratory for Nanoelectronics and Spintronics, Research Institute of Electrical Communication, Tohoku University, Sendai, Miyagi, Japan, ²WPI-Advanced Institute for Materials Research (WPI-AIMR), Tohoku University, Sendai, Miyagi, Japan, ³Graduate School of Engineering, Tohoku University, Sendai, Miyagi, Japan

02:36 PM-03:12 PM

DA-02. Solving Combinatorial Optimization Problems with Stochastic Actuated Magnetic Tunnel Junction

A. D. Kent

Physics, New York University, New York, New York, United States

03:12 PM-03:48 PM

DA-03. Probabilistic Computing with Voltage-controlled Magnetic Tunnel Junctions and Digital CMOS

P. Khalili Amiri

Northwestern University, Evanston, Illinois, United States

03:48 PM-04:15 PM

Break

04:15 PM-04:51 PM

DA-04. Ising machine based on Magnetic Tunnel Junctions

E. Raimondo^{1, 3}, A. Grimaldi², R. Tomasello², M. Chiappini¹, A. Giordano³, M. Carpentieri², G. Finocchio³

¹Istituto Nazionale di Geofisica e Vulcanologia, Rome, Italy, ²Politecnico di Bari, Bari, Italy, ³University of Messina, Messina, Italy

04:51 PM-05:27 PM

DA-05. On-chip Training of Stochastic Multilayer Spintronic Neural Networks

P. Talatchian

SPINTEC, Grenoble, France

SESSION DB: ADVANCING MAGNONICS: UNLOCKING THE POTENTIAL OF THE THIRD DIMENSION

Chair(s): G. Gubbiotti, *IOM-CNR, Perugia, Italy*

Wednesday, October 29, 2025

02:00 PM-05:30 PM

Ballroom A

02:00 PM-02:36 PM

DB-01. Magnon control in dipolar 3D multilayered artificial spin-ice hybrid systems

R. Sultana¹, R. Negrello², V. Bhat¹, M. T. Kaffash¹, H. Carfagno³, T. C. Dion⁴, K. D. Stenning⁵, A. Vanstone⁵, H. Holder⁵, G. Alatteili⁶, V. Martinez⁶, T. Kimura⁴, R. Oulton⁵, H. Kurebayashi⁷, W. Branford⁵, E. Iacocca⁶, M. Doty⁸, Y. Ji¹, J. Gartside⁵, F. Montoncello², G. Gubbiotti⁹, B. Jungfleisch¹

¹Department of Physics and Astronomy, University of Delaware, Newark, Delaware, United States, ²Università di Ferrara, Ferrara, Italy,

³Department of Materials Science and Engineering, University of Delaware, Newark, Delaware, United States, ⁴Solid State Physics

Laboratory, Kyushu University, Fukuoka, Japan, ⁵Dept of Physics, Blackett Laboratory, Imperial College London, London, United

Kingdom, ⁶Center for Magnetism and Magnetic Nanostructures, University of Colorado Colorado Springs, Colorado Springs, Colorado,

United States, ⁷London Centre for Nanotechnology, University College London, London, United Kingdom, ⁸Department of Materials

Science and Engineering, University of Delaware, Newark, Delaware, United States, ⁹Istituto Officina dei Materiali del Consiglio

Nazionale delle Ricerche (IOM-CNR), Perugia, Italy

02:36 PM-03:12 PM

DB-02. Three-dimensional Control and Imaging of Spin Waves in Nanostructured Thin Films

V. Levati¹, M. Vitali¹, D. Girardi¹, S. Finizio², C. Donnelly³, J. Raabe², M. Panzeri¹, R. Silvani⁴, M. Madami⁴, D. Breitbach⁶, P. Pirro⁶, R. Bertacco¹, V. Russo¹, A. Li Bassi¹, G. Corrielli⁷, R. Osellame⁷, F. Maspero¹, A. Del Giacco¹, N. Pellizzi¹, I. Biancardi¹, P. Florio¹, S. Tacchi⁵, D. Petti¹, E. Albisetti¹

¹Politecnico di Milano, Milano, Italy, ²PSI, Villigen, Switzerland, ³Max Planck Institute, Dresden, Germany, ⁴Università di Perugia,

Perugia, Italy, ⁵CNR-IOM, Perugia, Italy, ⁶RPTU Kaiserslautern-Landau, Kaiserslautern, Germany, ⁷CNR-IFN, Milano, Italy

03:12 PM-03:48 PM

DB-03. Micromagnetic Simulation of High-Frequency Modes in Interconnected Nanowire Arrays

R. Hertel

Université de Strasbourg, CNRS, Institut de Physique et Chimie des Matériaux de Strasbourg, Strasbourg, France

03:48 PM-04:15 PM

Break

04:15 PM-04:51 PM

DB-04. Nonreciprocal magnonics in 3D nanostructures

F. Brevis¹, L. Körber², B. Mimica-Figari¹, R. Gallardo¹, A. Kákay³, P. Landeros¹

¹Departamento de Física, Universidad Técnica Federico Santa María, Valparaíso, Chile, ²Institute of Molecules and Materials,

Radboud University, Nijmegen, Netherlands, ³Institute of Ion Beam Physics and Materials Research, Helmholtz-Zentrum Dresden-

Rossendorf, Dresden, Germany

04:51 PM-05:27 PM

DB-05. Nonreciprocal Magnons in Programmable 3D Ferromagnetic Screws and Tubular Nanonetworks Created by Atomic Layer Deposition

D. Grundler^{1,2}

¹Institute of Materials (IMX), Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Vaud, Switzerland, ²Institute of Electrical and Micro Engineering (IEM), Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Vaud, Switzerland

SESSION DC: NANOPARTICLES, 3D, AND OTHER STRUCTURED MATERIALS

Chair(s): M. Charilaou, *Physics, University of Louisiana at Lafayette, Lafayette, Louisiana, United States*

Wednesday, October 29, 2025

02:00 PM-05:30 PM

Ballroom C

02:00 PM-02:36 PM

DC-01. Creating Topological Spin and Stray Field Textures with Coupled 3D Magnetic Nanohelices

J. Fullerton¹, N. Leo², J. Jurczyk³, C. Donnelly⁴, D. Sanz Hernandez⁵, L. Skoric⁶, N. Mille⁷, S. Stanescu⁷, D. MacLaren⁸, R. Belkhou⁷, A. Hierro-Rodriguez⁹, A. Fernández-Pacheco³, C. Phatak^{1,10}

¹Materials Science Division, Argonne National Laboratory, Lemont, Illinois, United States, ²Department of Physics, University of Loughborough, Loughborough, United Kingdom, ³Institute of Applied Physics, TU Wien, Vienna, Austria, ⁴Max Planck Institute for Chemical Physics of Solids, Dresden, Germany, ⁵Laboratoire Albert Fert, CNRS, Thales, Université Paris-Saclay, Palaiseau, France, ⁶University of Cambridge, Cambridge, United Kingdom, ⁷Synchrotron SOLEIL, Saint-Aubin, France, ⁸SUPA, School of Physics and Astronomy, University of Glasgow, Glasgow, United Kingdom, ⁹Depto. Física, Universidad de Oviedo, Oviedo, Spain, ¹⁰Department of Materials Science and Engineering, Northwestern University, Evanston, Illinois, United States

02:36 PM-02:48 PM

DC-02. Unconventional Spin Textures in 3D Magnetic Möbius Bands

C. Langton¹, D. Bhattacharya¹, B. Fugetta¹, Z. Chen¹, O. Bezsmertna⁴, D. W. Raftrey^{2,3}, J. Sands^{2,3}, S. Satapathy², C. Fernandez-Gonzalez⁵, A. Sorrentino⁵, D. Makarov⁴, P. Fischer², G. Yin¹, K. Liu¹

¹Department of Physics, Georgetown University, Washington, District of Columbia, United States, ²Materials Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, California, United States, ³Department of Physics, University of California Santa Cruz, Santa Cruz, California, United States, ⁴Institute of Ion Beam Physics and Materials Research, Helmholtz-Zentrum Dresden-Rossendorf, Dresden, Germany, ⁵MISTRAL Beamline, ALBA Synchrotron Light Facility, Barcelona, Spain

02:48 PM-03:00 PM

DC-03. Characterizing fragile magnetic textures in three dimensions using Scanning NV magnetometry

P. Rickhaus¹, A. van den Berg², J. Lenz¹, S. Ladak²

¹Qnami AG, Basel, Switzerland, ²School of Physics and Astronomy, Cardiff University, Cardiff, United Kingdom

03:00 PM-03:12 PM

DC-04. Effect of curvature on chirality and magnetic configuration in perpendicular Co/Pd multilayer films

D. Bhattacharya¹, C. Langton¹, D. W. Raftrey², B. Fugetta¹, S. Satapathy², O. Bezsmertna³, A. Sorrentino⁴, D. Makarov³, G. Yin¹, K. Liu¹, P. Fischer²

¹Physics, Georgetown University, Washington, District of Columbia, United States, ²Materials Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, California, United States, ³Helmholtz-Zentrum Dresden-Rossendorf e.V., Institute of Ion Beam Physics and Materials Research, Dresden, Germany, ⁴ALBA light source, Cerdanyola del Vallès, Spain

03:12 PM-03:24 PM

DC-05. Nonlinear Dynamics and Frequency Comb Generation in Macroscopic Artificial Spin Ice

R. Peroor, L. A. Scafuri, E. Iacocca, D. A. Bozhko

Department of Physics and Energy Science, University of Colorado Colorado Springs, Colorado Springs, Colorado, United States

03:24 PM-03:36 PM

DC-06. Perturbing the Pyrochlore Structure: Local structure and Magnetic tuning in doped rare earth titanate compound

R. Sain¹, M. Sahoo³, C. Upadhyay²

¹School of Materials Science and Technology, IIT (BHU), Varanasi, UTTAR PRADESH, India, ²School of Materials Science and Technology, IIT (BHU), Varanasi, UTTAR PRADESH, India, ³Surface and Sensors Studies Division, Materials Science Group, Indira Gandhi Centre for Atomic Research, Kalpakkam, Kalpakkam, India

03:36 PM-03:48 PM

DC-07. Complex Evolution of Magnetic Anisotropies in Magnetosomes of Magnetotactic Bacteria

D. Gándia¹, L. Marcano^{2,3}, L. Gandarias^{4,5}, A. G. Gubieda⁴, A. García-Prieto¹², L. Fernández Barquín⁶, J. Espeso⁶, E. M. Jefremovas^{7,8,9}, I. Orue¹⁰, A. Abad⁴, A. García-Arribas¹¹, M. Fernandez Gubieda¹¹, J. Alonso Masa⁶

¹Ciencias, Universidad Pública de Navarra, Pamplona, Spain, ²Física, Universidad de Oviedo, Oviedo, Spain, ³CIC biomaGUNE, Donostia, Spain, ⁴Inmunología, Microbiología y Parasitología, Universidad del País Vasco (UPV/EHU), Leioa, Spain, ⁵Aix-Marseille Institute of Biosciences and Biotechnologies (BIAM), Aix-Marseille Université, CNRS, Saint-Paul-lez-Durance, France, ⁶CITIMAC, Universidad de Cantabria, Santander, Spain, ⁷Institute of Physics, Johannes Gutenberg University of Mainz, Mainz, Germany, ⁸Physics and Materials Science, University of Luxembourg, Grand Duchy of Luxembourg, Luxembourg, ⁹Institute for Advanced Studies, Luxembourg, Luxembourg, ¹⁰SGIker, Universidad del País Vasco (UPV/EHU), Leioa, Spain, ¹¹Electricidad y Electrónica, Universidad del País Vasco (UPV/EHU), Leioa, Spain, ¹²Física Aplicada, Universidad del País Vasco (UPV/EHU), Bilbao, Spain

03:48 PM-04:15 PM

Break

04:15 PM-04:27 PM

DC-10. All-Oxide Hybrid Spinel Core@Shell Nanoparticles: A Seed-Mediated Approach Toward Magneto-Optical Theranostics

S. Jan¹, R. Das², R. Roy Chowdhury¹, A. I. Ojo¹, Y. Wadumesthri¹, H. Rodríguez Gutiérrez¹, H. Srikanth¹, D. A. Arena¹

¹Department of Physics, University of South Florida, Tampa, Florida, United States, ²SEAM Research Centre, South East Technological University, Waterford, Ireland

04:27 PM-04:39 PM

DC-11. Nanostructuring effects on the Verwey Transition in Fe₃O₄ Nanoparticles

R. Gautam¹, W. Pitt³, R. Harrison², K. Chesnel¹

¹Physics, Brigham Young University, Provo, Utah, United States, ²Chemistry, Brigham Young University, Provo, Utah, United States, ³Chemical Engineering, Brigham Young University, Provo, Utah, United States

04:39 PM-04:51 PM

DC-12. Dynamics of magnetic fluctuations in Fe₃O₄ nanoparticles

K. Chesnel, J. Rackham

BYU, Provo, Utah, United States

SESSION DD: ND2FE14B AND MEASUREMENT TECHNIQUES

Co-Chair(s): A. Lisfi, *Physics, Morgan State University, Baltimore, Maryland, United States* and Y. Hirayama, *National Institute of Advanced Industrial Science and Technology (AIST), Nagoya, Japan*

Wednesday, October 29, 2025

02:00 PM-05:30 PM

Ballroom B

02:00 PM-02:12 PM

DD-01. Unveiling Buried Magnetic Nanodomains: High-Resolution Phase Mapping in Thin Films with Synchrotron Radiation

A. Lengyel¹, D. G. Merkel¹, G. Bazso¹, A. I. Chumakov², D. L. Nagy¹, G. Hegedus¹, Z. E. Horvath³, N. M. Nemes⁴, M. A. Gracheva³, E. O. Szilagyi¹, S. Sajti¹, A. Deak³, L. Illes³, A. Nemeth¹, F. Maccari⁵, I. Radulov⁵, M. Major^{1,5}, Z. Zolnai³, S. Graning⁶, K. Sajerman⁷, T. Vaczi¹, P. Petrik³, D. Mukherjee³, S. Lenk⁷, D. Bessas², G. Z. Radnoczi³

¹HUN-REN Wigner Research Centre for Physics, Budapest, Budapest, Hungary, ²European Synchrotron Radiation Facility, Grenoble, France, ³HUN-REN Centre for Energy Research, Budapest, Budapest, Hungary, ⁴Universidad Complutense de Madrid, Madrid, Spain, ⁵Technische Universität Darmstadt, Darmstadt, Germany, ⁶Eotvos Lorand University, Budapest, Budapest, Hungary, ⁷Budapest University of Technology and Economics, Budapest, Budapest, Hungary

02:12 PM-02:24 PM

DD-03. Accurate Saturation Magnetization Measurement Method for Fe-based Alloy Foils

T. Tabata, Y. Asari, M. Noujima, S. Terada

Research & Development Group, Hitachi Ltd., Hitachi, Ibaraki, Japan

02:24 PM-02:36 PM

DD-05. New steel coupons hosting residual stresses for steel health monitoring calibration

T. Damatopoulou, E. V. Hristoforou

National TU of Athens, Athens, Greece

02:36 PM-02:48 PM

DD-06. Raman Spectroscopic and Computational Investigation of Gold-Coated CoFe₂O₄ Thin Films

T. Lamichhane

Engineering & Physics, University Of Central Oklahoma, Edmond, Oklahoma, United States

02:48 PM-03:00 PM

DD-07. Measuring Magnetic Exchange using Magnetometry and Atomistic Simulations

C. Swindells^{1,2}, W. K. Peria¹, J. Barker³, J. J. Wisser¹, M. Schneider¹, M. Pufall¹, H. T. Nembach¹

¹NIST, Boulder, Colorado, United States, ²Electrical Engineering, CU Denver, Denver, Colorado, United States, ³School of Physics and Astronomy, University of Leeds, Leeds, United Kingdom

03:00 PM-03:12 PM

DD-08. Mechanical Strengthening of Nd-Fe-B Sintered Magnets via Microstructure Engineering

B. Cui, X. Liu, W. Tang, I. Nlebedim, J. Cui

Ames National Laboratory, Ames, Iowa, United States

03:12 PM-03:24 PM

DD-10. Relationship between Nd-rich phase and oxygen content for additive-free sintering with regenerated powder from magnet sludge waste

D. Kim¹, V. Galkin²

¹Korea Institute of Materials Science, Changwon, Korea (the Republic of), ²Daegu Gyeongbuk Institute of Science and Technology, Daegu, Korea (the Republic of)

03:24 PM-03:36 PM

DD-11. Correlation of Coercivity, Microstructure, and Surface Defects in HDDR-Processed Nd-Fe-B Powders for Bonded Magnet Applications

X. Liu¹, M. K. Kesler², Z. Tener³, M. J. Kramer⁴, I. Nlebedim¹

¹Division of Critical Materials, Ames National Laboratory, Ames, Iowa, United States, ²Materials Science and Technology Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee, United States, ³Savannah River National Laboratory, Aiken, South Carolina, United States, ⁴Division of Materials Science and Engineering, Ames National Laboratory, Ames, Iowa, United States

03:36 PM-03:48 PM

DD-12. Critical Rare Earth Lean Nd-Ce-Fe-B Permanent Magnets Powder via Wet Chemical Process

H. Parmar, M. Broders, C. I. Nlebedim, X. Liu

Division of Critical Materials, Ames National Laboratory, Critical Materials Innovation Hub, Ames, Iowa, United States

03:48 PM-04:00 PM

DD-13. Tailoring Nd-Fe-B Microstructure via LPBF like Cooling in Melt Spinning

A. Paul^{1,2}, J. Shield^{1,2}

¹Mechanical and Materials engineering, University of Nebraska-Lincoln, Lincoln, Nebraska, United States, ²Nebraska Center for Materials and Nanoscience, University of Nebraska-Lincoln, Lincoln, Nebraska, United States

04:00 PM-04:12 PM

DD-14. Dy-Free Sintered Nd-Fe-B Magnets Enhanced by Pr-Al-Cu Alloy via Different Grain Boundary Engineering Techniques.

W. Tang¹, J. Wang¹, Y. Varma², C. Pan¹, J. Cui^{1,2}

¹Ames National Laboratory, Ames, Iowa, United States, ²Materials Science and Engineering, Iowa State University, Ames, Iowa, United States

SESSION DE: MAGNETIC GROUND STATES, PHASE TRANSITIONS AND MAGNETO-ELASTIC PHENOMENA

Co-Chair(s): N. J. Jones, *Physical Metallurgy and Fire Performance Branch, Naval Surface Warfare Center, Carderock Division, Bethesda, Maryland, United States* and H. Chi, *University of Ottawa, Ottawa, Ontario, Canada*

Wednesday, October 29, 2025

02:00 PM-05:30 PM

Room 2DE

02:00 PM-02:36 PM

DE-01. Tuning Magnetic Properties of FeGa Magnetostrictive Thin Films Using Light or Electric Fields

P. Tiberto¹, G. Barrera¹, F. Celegato¹, M. Coisson¹, G. Pradhan¹, D. Martella²

¹Advance Materials and Life Sciences, INRIM, Torino, Italy, ²Department of Chemistry "Ugo Schiff", Università di Firenze, Torino, Italy

02:36 PM-02:48 PM

DE-03. Ultra-Flexible Magneto-Elastic Diaphragm for Low-Power Actuation Applications

K. Moussi, S. Ben Mbarek, S. Amara, G. Setti

King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia

02:48 PM-03:00 PM

DE-04. Heterogeneously Integrated Lithium Niobate-Yttrium Iron Garnet Heterostructures for Magnetoelectric Devices

A. R. Will-Cole¹, L. Hackett¹, M. Miller¹, T. Friedmann¹, S. Arterburn¹, S. Herrera¹, M. Eichenfield²

¹Sandia National Laboratories, Albuquerque, New Mexico, United States, ²University of Arizona, Tucson, Arizona, United States

03:00 PM-03:12 PM

DE-05. Multimodal Magnetoactive Elastomers for Magnetic and Touch Sensing with Stylus Functionality

Y. Sekertekin^{1,2}, S. Sonkusale^{1,2}

¹Electrical and Computer Engineering, Tufts University, Medford, Massachusetts, United States, ²Sonkusale Research Laboratory, Medford, Massachusetts, United States

03:12 PM-03:24 PM

DE-06. Selective readout of isolated superconducting hybrid magnonic circuit

P. Pal^{1,2}, U. Welp¹, R. Divan³, V. Novosad¹, A. Hoffmann², Y. Li¹

¹Materials Science Division, Argonne National Laboratory, Lemont, Illinois, United States, ²Department of Materials Science and Engineering and Materials Research Laboratory, University of Illinois Urbana-Champaign, Champaign, Illinois, United States, ³Center for Nanoscale Materials, Argonne National Laboratory, Lemont, Illinois, United States

03:24 PM-03:36 PM

DE-07. Tailored Ferromagnetic Resonance in Thick Film YIG via Ion-Implantation Technique

H. Baldino¹, D. Hedlund², K. Collins³, P. Ström⁴, D. Heiman^{5,6}, R. Peroor⁷, E. Abels⁷, D. A. Bozhko⁷, M. Page³, M. Newburger³, P. Kulik^{1,2}

¹Material Science and Engineering, University of Central Florida, Orlando, Florida, United States, ²Electrical and Computer Engineering, University of Central Florida, Orlando, Florida, United States, ³Materials and Manufacturing Directorate, Air Force Research Laboratory, WPAFB, Ohio, United States, ⁴Physics and Astronomy, Uppsala University, Uppsala, Sweden, ⁵Physics Department, Northeastern University, Boston, Massachusetts, United States, ⁶Plasma Science and Fusion Center, Massachusetts institute of technology, Cambridge, Massachusetts, United States, ⁷Department of Physics and Energy Science, Center for Magnetism and Magnetic Nanostructures, University of Colorado, Colorado Springs, Colorado, United States

03:36 PM-04:12 PM

DE-08. An exploration of field-induced ground states and phase transitions in pyrochlores using torque magnetometry

C. Beekman^{1,2}

¹Physics, Florida State University, Tallahassee, Florida, United States, ²National High Magnetic Field Laboratory, Tallahassee, Florida, United States

04:12 PM-04:24 PM

DE-10. Effect of Si Concentration on the Crystal Structure and Magnetic Ground State of Mn₂FeAl_{1-x}Si_x Heusler Alloys

S. Saha¹, A. K. Khorwal¹, Y. Bitla¹, A. K. Patra^{1,2}

¹Department of Physics, Central University of Rajasthan, Ajmer, Rajasthan, India, ²School of Physics, University of Hyderabad, Hyderabad, Telangana, India

SESSION DF: SPIN INJECTION, PUMPING AND TRANSFER TORQUES

Chair(s): D. Qu, Center for Condensed Matter Sciences, National Taiwan University, Taipei, Taiwan

Wednesday, October 29, 2025

02:00 PM-05:30 PM

Room 2BC

02:00 PM-02:36 PM

DF-01. Self-generated Spin-orbit Torques Driven by Magnonic Spin Dissipation in Antiferromagnet/Ferromagnet Bilayer

W. Choi^{1,2}, J. Ha^{1,3}, M. Jung¹, S. Kim¹, H. Koo^{1,4}, O. Lee¹, B. Min¹, H. Jang^{2,5}, A. Shahee⁶, J. Kim⁷, M. Kläui⁶, J. Hong³, K. Kim⁸, D. Han¹

¹Center for Semiconductor Technology, Korea Institute of Science and Technology, Seoul, Korea (the Republic of), ²Department of Materials Science and Engineering, Seoul National University, Seoul, Korea (the Republic of), ³Department of Physics and Chemistry, Daegu Gyeongbuk Institute of Science and Technology, Daegu, Korea (the Republic of), ⁴KU-KIST Graduate School of Converging Science and Technology, Korea University, Seoul, Korea (the Republic of), ⁵Research Institute of Advanced Materials, Seoul National University, Seoul, Korea (the Republic of), ⁶Institute for Physics, Johannes Gutenberg University, Mainz, Germany, ⁷Department of Physics, Kunsan National University, Kunsan, Korea (the Republic of), ⁸Department of Physics, Yonsei University, Seoul, Korea (the Republic of)

02:36 PM-03:12 PM

DF-02. Temperature gradient-driven motion of magnetic domains in a magnetic metal multilayer by entropic forces

L. Huang^{1,2}, J. Barker¹, L. Kailas¹, S. Hait¹, S. Connell¹, G. Burnell¹, C. Marrows¹

¹University of Leeds, Leeds, United Kingdom, ²University of Sheffield, Sheffield, United Kingdom

03:12 PM-03:24 PM

DF-03. Dependence of Current-Induced Switching Threshold on Composition Gradient Width in Si/Al-Integrated Perpendicular Magnetic Films

S. Takagi¹, K. Yamanoi¹, Y. Nozaki^{1,2}

¹Dept. of Phys., Keio Univ., Yokohama, Kanagawa, Japan, ²Center for Spintronics Research Network, Keio Univ., Yokohama, Kanagawa, Japan

03:24 PM-03:36 PM

DF-04. Dissipationless Spin-orbit Torque in Magnetic Insulators

S. Ahmad¹, F. Mahfouzi², P. Haney², F. Xue¹

¹Department of Physics, University of Alabama at Birmingham, Birmingham, Alabama, United States, ²PML, National Institute of Standards and Technology, Gaithersburg, Maryland, United States

03:36 PM-03:48 PM

DF-05. Effect of Interfacial DMI on Write Error Rate Anomalies of STT-MRAM Devices

P. Das¹, M. Rajib¹, J. Atulasimha^{1,2}

¹Department of Mechanical and Nuclear Engineering, Virginia Commonwealth University, Richmond, Virginia, United States,

²Department of Electrical and Computer Engineering, Virginia Commonwealth University, Richmond, Virginia, United States

03:48 PM-04:15 PM

Break

04:15 PM-04:27 PM

DF-06. Influence of Device Structure on RF Oscillation Properties in Spin Hall Nano Oscillators

H. Iida^{1,2}, K. De Zoysa¹, Y. Yoshida^{1,2}, A. Sud³, A. Lagarrigue¹, T. Dohi¹, A. Kumar^{4,5}, A. A. Awad^{1,4}, S. Kanai^{1,6}, J. Akerman^{1,4}, S. Fukami^{1,5}, H. Ohno^{5,7}

¹LNS, RIEC, Tohoku Univ., Sendai, Japan, ²Graduate School of Engineering, Tohoku Univ., Sendai, Japan, ³FRIS, Tohoku Univ., Sendai, Japan, ⁴Physics department, Univ. of Gothenburg, Gothenburg, Sweden, ⁵CSIS, Tohoku Univ., Sendai, Japan, ⁶WPI-AIMR Tohoku Univ., Sendai, Japan, ⁷CIES, Tohoku Univ., Sendai, Japan

04:27 PM-04:39 PM

DF-07. Magnetotransport Signatures of Spin Transfer Beyond the Semiclassical Regime

G. T. Street, S. Emori

Physics, Virginia Tech, Blacksburg, Virginia, United States

04:39 PM-04:51 PM

DF-08. Single-Layer Spin-Orbit-Torque Magnetization Switching Due to Spin Berry Curvature Generated by Minute Spontaneous Atomic Displacement in Weyl Oxide SrRuO₃

H. Horiuchi¹, Y. Araki², Y. K. Wakabayashi³, J. Ieda², M. Yamanouchi⁴, Y. Sato⁵, S. Kaneta-Takada¹, Y. Taniyasu³, H. Yamamoto³, Y. Krockenberger³, M. Tanaka^{1,6,7}, S. Ohya^{1,6,7}

¹Department of Electrical Engineering and Information Systems, The University of Tokyo, Bunkyo-ku, Tokyo, Japan, ²Advanced Science Research Center, Japan Atomic Energy Agency, Tokai-mura, Ibaraki, Japan, ³NTT Basic Research Laboratories, NTT Corporation, Atsugi-shi, Kanagawa, Japan, ⁴Division of Electronics for Informatics, Graduate School of Information Science and Technology, Hokkaido University, Sapporo-shi, Hokkaido, Japan, ⁵Research and Education Institute for Semiconductors and Informatics, Kumamoto University, Chuo-ku, Kumamoto, Japan, ⁶Center for Spintronics Research Network (CSRN), The University of Tokyo, Bunkyo-ku, Tokyo, Japan, ⁷Institute for Nano Quantum Information Electronics, The University of Tokyo, Bunkyo-ku, Tokyo, Japan

04:51 PM-05:03 PM

DF-09. Spin Pumping and Inverse Spin Hall Effect in Chiral Polymers

S. Li, S. Jeon, Y. Chen, M. Yoo, A. Hoffmann, Y. Diao

University of Illinois Urbana Champaign, Urbana, Illinois, United States

05:03 PM-05:15 PM

DF-10. Unconventional spin polarization unleashed by Fermi surface modulation

S. Sugimoto², Y. Araki¹, J. Ieda¹, S. Kasai², Y. K. Takahashi²

¹*Japan Atomic Energy Agency, Tokai, Japan*, ²*National Institute for Materials Science, Tsukuba, Japan*

05:15 PM-05:27 PM

DF-11. Increased Rectified Voltage in Magnetic Tunnel Junction with Pseudo Spin Valve Structure for Wireless Signals Energy Harvesting

K. Kino^{1,2}, H. Chiku^{1,2}, T. Dohi², T. Shinoda^{1,2}, S. Kanai^{1,2,3}, H. Ohno^{1,3,4}, S. Fukami^{1,2,3}

¹*RIEC, Tohoku Univ., Sendai, Japan*, ²*Graduate School of Engineering, Tohoku Univ., Sendai, Japan*, ³*WPI-AIMR, Tohoku Univ., Sendai, Japan*, ⁴*CSIS, Tohoku Univ., Sendai, Japan*

SESSION DG: MAGNETIC SENSORS, HIGH FREQUENCY DEVICES, AND POWER ELECTRONICS I

Co-Chair(s): N. Alatawneh, *Sacred Heart University, Trumbull, Connecticut, United States* and N. Schulz, *Naval Surface Warfare Center, Panama City Division, Panama City Beach, Florida, United States*

Wednesday, October 29, 2025

02:00 PM-05:30 PM

Room 2A

02:00 PM-02:36 PM

DG-01. Magnetic Field Detection from an Ingestible Device using a Tunnel Magnetoresistance Sensor

T. Kubota¹, H. Wagatsuma², K. Fujiwara², M. Endo¹, T. Hojo^{1,3}, M. Ishida¹, N. Nakasato^{1,6}, H. Ono², H. Fukushima², S. Kumagai², H. Matsuzaki², K. Yokoi⁴, S. Oyagi⁴, R. Otsuka⁴, I. Yamane⁴, D. Canlas⁵, J. Komaili⁵, S. Pathare⁵, J. Withrington⁵, T. Thompson⁵, J. Jinno⁴, K. Onishi⁴, Y. Ando^{1,3}

¹*Advanced Spintronics Medical Engineering, Tohoku University, Sendai, Miyagi, Japan*, ²*Spin Sensing Factory Inc., Sendai, Japan*,

³*Department of Applied Physics, Tohoku University, Sendai, Miyagi, Japan*, ⁴*Otsuka Pharmaceutical Co., Ltd., Tokyo, Japan*, ⁵*Otsuka Precision Health Inc., Hayward, California, United States*, ⁶*Graduate School of Medicine, Tohoku University, Sendai, Japan*

02:36 PM-02:48 PM

DG-02. Enhancement of Exchange bias in NiFe-IrMn Planar Hall bilayer thin films for rotary sensing applications

K. S. Narasimhan, P. Anil Kumar

Physics, Indian Institute of Science, Bangalore, Bangalore, Karnataka, Karnataka, India

02:48 PM-03:00 PM

DG-03. Plasmonically-enhanced Digital Spintronic Detector based on Stochastic Magnetic Tunnel Junctions

S. Gupta, Z. Yang, J. Shalabi, A. Deka, L. Bauer, Z. Jacob

Purdue University, West Lafayette, Indiana, United States

03:00 PM-03:12 PM

DG-05. Area-Efficient Perpendicular Magnetic Tunnel Junction Detectivity Enhancement using Vertical Flux Concentrators

Z. Ali¹, H. Naganuma², P. Wallace⁵, S. X. Wang¹, A. Poon¹

¹*Electrical Engineering, Stanford University, Stanford, California, United States*, ²*Nagoya University, Nagoya, Japan*, ³*Stanford University, Stanford, California, United States*

03:12 PM-03:24 PM

DG-06. Noise Reduction and Dynamic Range Enhancement of Pulse-Driven GMI Sensors via Optimized Anti-Aliasing Filtering

S. Idachi, T. Uchiyama

Department of Electronics, Nagoya university, Nagoya, Aichi, Japan

03:24 PM-03:36 PM

DG-07. High Frequency Transformer Integrated with SiC MOSFETs for Smart Transformer

J. Lu, W. Yao, N. Subhani, A. Seagar, Y. Zhu

School of EBE, Griffith University, Gold Coast, Queensland, Australia

03:36 PM-03:48 PM

DG-08. Influence of heat-treatment on structure and magnetic properties of 10 μm -thick Fe-1,2,3wt.%Si foils

S. Aija¹, T. Takasu¹, S. Muroga¹, Y. Endo^{1,2}

¹*Department of Electrical Engineering, Tohoku University, Sendai, Japan*, ²*CSIS, Tohoku University, Sendai, Japan*

03:48 PM-04:15 PM

Break

04:15 PM-04:27 PM

DG-09. An Optimized Design of a Dual Rotor Axial Flux Switched Reluctance Electrical Machine

M. Trapanese

Dipartimento di Ingegneria, Palermo University, Palermo, Italy

04:27 PM-04:39 PM

DG-10. Microwave-Driven Magnetic Dynamics in Low-Temperature Synthesized Hexaferrites: A Static-to-Dynamic Perspective

K. Rana^{1,2}, M. Tomar¹, A. Thakur^{3,2}

¹*Department of Physics and Astrophysics, University of Delhi, Delhi, New Delhi, India*, ²*Innovative Science Research Society, Shimla, Himachal Pradesh, India*, ³*Physics, Amity University, Gurugram, Haryana, India*

04:39 PM-04:51 PM

DG-11. Magnetic Bias-Driven Modulation of Graphene for Tunable Gyrotropic and Magnetoplasmon Devices

S. Amanatiadis¹, T. Ohtani², T. Zygiridis³, N. V. Kantartzis¹, Y. Kanai⁴

¹*Aristotle University of Thessaloniki, Thessaloniki, Greece*, ²*1-17-134, Omachi, Asahikawa, Japan*, ³*University of Western Macedonia, Kozani, Greece*, ⁴*Niigata Institute of Technology, Kashiwazaki, Japan*

04:51 PM-05:03 PM

DG-12. Optimization of Magnetoelastic Ribbons for Mass Sensors and Development of Novel Applications in Hydrogel Gelation Time Control

M. Shaji¹, I. Tapon¹, J. Vilas-Vilela^{1,2}, A. Lasheras¹, L. Pérez-Álvarez^{1,2}, A. Lopes¹

¹*University of Basque Country, Leioa, Spain*, ²*BCMaterials, Leioa, Spain*

05:03 PM-05:15 PM

DG-13. High-frequency Magnetic Levitation of Macroscopic Masses

V. Sharma¹, M. Simon², R. Candler^{1,3}

¹*Department of Electrical and Computer Engineering, University of California, Los Angeles, Los Angeles, California, United States*,

²*Department of Physics and Astronomy, University of California, Los Angeles, Los Angeles, California, United States*, ³*California*

NanoSystems Institute, University of California, Los Angeles, Los Angeles, California, United States

SESSION DQ: MAGNETO-CALORIC, MAGNETOELECTRIC, AND MULTIFERROIC MATERIALS AND DEVICES (POSTER SESSION)

Chair(s): K. Srinivasan, *Electrical and Computer Engineering, Boise State University, Boise, Idaho, United States*

Wednesday, October 29, 2025

02:30 PM-05:30 PM

Exhibit Hall Posters

DQ-01. Structural, Magnetic, and Magnetocaloric Properties of Pseudo-binary $(\text{Er}_{1-x}\text{Yb}_x)_2\text{In}$

A. Kumar, A. Thayer, P. Singh, A. Biswas, Y. Mudryk

Ames National Laboratory, Ames, Iowa, United States

DQ-02. The Effect of Ti Addition on the Magnetic and Magnetocaloric Properties of Drop-casted $\text{Ni}_2\text{Mn}_{0.55}\text{Cu}_{0.35}\text{Fe}_{0.10}\text{Ga}$ Heusler alloy

K. Schaeffer¹, H. A. Adedo¹, J. R. DeFeo², V. Yenugonda², A. Lamichhane¹, A. Pathak², M. Khan¹

¹*Physics, Miami University, Oxford, Ohio, United States*, ²*SUNY Buffalo State University, Buffalo, New York, United States*

DQ-03. A study of martensitic phase transitions in the paramagnetic state in Fe doped $\text{Ni}_2\text{Mn}_{0.65-x}\text{Cu}_{0.35}\text{Fe}_x\text{Ga}$ Heusler alloys prepared by drop-casting

A. Lamichhane¹, J. R. DeFeo², H. A. Adedo¹, V. Yenugonda², K. Schaeffer¹, A. Pathak², M. Khan¹

¹*Physics, Miami University, Oxford, Ohio, United States*, ²*Physics, SUNY Buffalo State University, Buffalo, New York, United States*

DQ-04. Magnetocaloric Effect in $\text{PrNi}_{2-x}\text{Co}_x$ Alloys: Simulation and Experimental Approaches

R. Duarte de Melo, C. L. Rodrigues, A. Gomes

Instituto de Física, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Rio de Janeiro, Brazil

DQ-05. Colloidal Synthesis and Size-Dependent Magnetic Properties of Discrete MnNiSb Nanoparticles for Thermomagnetic Waste Heat Recovery

F. Amoo², S. Brock², J. Sklenar¹, V. Ostapyuk², T. Jeffrey¹

¹*Physics and Astronomy, Wayne State University, Detroit, Michigan, United States*, ²*Chemistry, Wayne State University, Detroit, Michigan, United States*

DQ-06. Topological Magnetic Texture Stabilization in $\epsilon\text{-Fe}_2\text{O}_3$ Thin Films

D. DeTellem, S. Witanachchi, M. Phan

Department of Physics, University of South Florida, Tampa, Florida, United States

DQ-07. Assembly of Magnetic Tunnel Junctions with Chiral Nanographenes

C. Fang, W. Niu, J. Deka, S. Parkin

Max Planck Institute of Microstructure Physics, Halle (Saale), Sachsen-Anhalt, Germany

DQ-08. Magnetic and Transport Properties of ordered LaSrMnRuO_6 double perovskite thin Films

A. Kumar^{1,2}, D. Palai³, D. Samal³, P. Santhosh^{1,2}

¹*Department of physics, IIT Madras, Chennai, Tamilnadu, India*, ²*Functional oxide Research Group, IIT Madras, Chennai, Tamilnadu, India*, ³*Department of physics, Indian Institute of Physics, Bhubaneswar, Odisha, India*

DQ-09. Doped yttrium iron garnet magnetic nanoparticles with high Zn concentration for potential magneto-electric applications

R. Mohammed¹, V. Grynko^{1,2}, J. Rado¹, A. Alexandrov¹, A. Hodgson¹, H. Chumak³, M. Popov³, V. Batarчук^{1,2}, A. Reznik¹, Y. Shepelytskyi^{1,2}, M. S. Albert^{1,2,4}

¹*Lakehead University, Thunder Bay, Ontario, Canada*, ²*Thunder Bay Regional Health Research Institute, Thunder Bay, Ontario, Canada*, ³*Taras Shevchenko National University of Kyiv, Kyiv, Ukraine*, ⁴*Northern Ontario School of Medicine, Thunder Bay, Ontario, Canada*

DQ-10. Experimental and computational study of nearly half-metallic V₂CoGa

P. Kharel², C. Sadler¹, C. Brown², M. Anas², P. Shand¹, P. Lukashov¹

¹Physics, University of Northern Iowa, Cedar Falls, Iowa, United States, ²Chemistry, Biochemistry and Physics, South Dakota State University, Brookings, South Dakota, United States

SESSION DR: MAGNETORESISTANCE, SPIN TORQUE, AND SPIN INJECTION IN HETEROSTRUCTURES AND FILMS (POSTER SESSION)

Co-Chair(s): A. Chaurasiya, Physics, University of Gothenburg, Gothenburg, Sweden and G. Yu, Institute of Physics, Chinese Academy of Sciences, Beijing, China and D. Kim, Department of Materials Science and Engineering, KAIST, Daejeon, Korea (the Republic of)

Wednesday, October 29, 2025

02:30 PM-05:30 PM

Exhibit Hall Posters

DR-01. Magnetization switching by a laser induced thermo-current in a GdFeCo/Pt hetero-structure film

S. Sumi¹, M. Mohammadi¹, K. Tanabe¹, H. Awano¹, Y. Nakatani²

¹Toyota Technological Institute, Nagoya, Japan, ²University of Electro-Communications, Tokyo, Japan

DR-02. NIST SP 800-90B Compliant Perpendicular Magnetic Tunnel Junction Based True Random Number Generator

Q. Jia¹, S. Egan², Y. Lv¹, J. Wang¹

¹University of Minnesota, Minneapolis, Minnesota, United States, ²Deep Science Ventures, London, United Kingdom

DR-03. Influence of In-Plane Geometry design on Spin Transport in NiFe Thin Films

D. Han, J. Lee, K. Son

Physics education, Kongju National University, Gongju, Korea (the Republic of)

DR-04. Electrical detection of a minimal spin accumulation in silicon

Y. Koshino¹, M. Goto³, R. Ohshima², M. Shiraishi², Y. Ando¹

¹Osaka Metropolitan University, Osaka, Japan, ²Kyoto University, Kyoto, Japan, ³Tokyo University of Science, Tokyo, Japan

DR-05. Electrochemical Deposition Optimization of Fe-Co-B/Ta Magnetic Multilayers for Spintronics

A. S. Poulo, T. Lamichhane, J. A. Torres, M. Goodman, L. Cosgrove, J. Le Chin, H. Kluck Graham

Engineering and Physics, University of Central Oklahoma, Oklahoma City, Oklahoma, United States

DR-06. Solid-phase epitaxy of Co₂Fe_{0.4}Mn_{0.6}Si full-Heusler-alloy thin films utilizing (001)-textured MgO barrier

K. Watanabe¹, T. Nakano^{1,2}, M. Oogane^{1,3}

¹Department of Applied Physics, Graduate School of Engineering, Tohoku University, Sendai, Japan, ²Research Center for Green X-Tech, Green Goals Initiative, Tohoku University, Sendai, Japan, ³Center for Science and Innovation in Spintronics, Tohoku University, Sendai, Japan

DR-07. Fabrication of Fcc(111)-Oriented MTJs on Bcc(110)-Oriented FeAlSi Films for TMR Sensors Application

D. Amiie¹, T. Hojo¹, M. Oogane^{1,2}

¹Graduate school of Engineering, Tohoku Univ., Sendai-shi, Miyagi-ken, Japan, ²Tohoku Univ. CSIS, Sendai-shi, Miyagi-ken, Japan

DR-08. Suppression of Electrical 1/f Noise in Magnetic Tunnel Junctions with Mg-Al-O Barriers

S. Nii¹, C. Zhang¹, H. He¹, Y. Wang¹, T. Hojo¹, T. Nakano^{1,2}, M. Oogane^{1,3}

¹Department of Applied Physics, School of Engineering, Tohoku Univ., Sendai, Japan, ²Green X-tech, Tohoku Univ., Sendai, Japan, ³CSIS, Tohoku Univ., Sendai, Japan

DR-09. Thickness-dependence of the anomalous Hall effect in magnetic heterostructures

E. M. Ababneh¹, N. Boyd², X. Fan², V. Amin¹

¹Indiana University Indianapolis, Indianapolis, Indiana, United States, ²University of Denver, Denver, Colorado, United States

DR-10. The effect of argon plasma exposure on in-plane uniaxial anisotropy in WS₂/Py bilayers

K. Islam, H. Pokhrel, S. Pollard

Physics and Materials Science, The University of Memphis, Memphis, Tennessee, United States

DR-11. Large Spin Nernst Effect in Ni₇₀Cu₃₀ Alloy

W. Li^{1,2}, C. Lin¹, G. Guo^{1,3}, S. Huang^{1,4}, D. Qu^{2,4}

¹Department of Physics, National Taiwan University, Taipei, Taiwan, ²Center for Condensed Matter Sciences, National Taiwan University, Taipei, Taiwan, ³Physics Division, National Center for Theoretical Sciences, Taipei, Taiwan, ⁴Center of Atomic Initiatives for New Materials, National Taiwan University, Taipei, Taiwan

DR-12. High-throughput ab initio study of magnetoelastic coupling and magnetostriction in cubic intermetallic compounds

H. Abdelhafiz¹, F. Mahfouzi², N. Kioussis³, K. Belashchenko¹

¹Department of Physics and Astronomy, University of Nebraska-Lincoln, Lincoln, Nebraska, United States, ²Physical Measurement Laboratory, National Institute of Standards and Technology, Gaithersburg, Maryland, United States, ³Department of Physics and Astronomy, California State University, Northridge, California, United States

DR-13. MTJ-Based Neuromorphic Circuit for Analog Machine Learning

S. Louis¹, A. N. Slavin¹, C. Trevillian¹, H. Bradley¹, D. Hanna¹, M. Abramson², I. Krivorotov², V. Tyberkevych¹

¹Oakland University, Rochester, Michigan, United States, ²University of California, Irvine, California, United States

DR-14. Solution of advanced classification tasks including MNIST dataset using spin wave based multiter AI system with nonlinear activation functions

K. Rivkin

RKMAG Corporation, Pacific Grove, California, United States

BIERSTUBE

Wednesday, October 29, 2025

05:00 PM-06:30 PM

Exhibit Hall Events

STUDENTS IN MAGNETISM NETWORKING EVENT

Wednesday, October 29, 2025

05:00 PM-06:30 PM

Hilton Event Lawn

AI IN MAGNETISM: THE GOOD, THE BAD, AND THE UGLY

Chair(s): H. Srikanth, *Physics, University of South Florida, Tampa, Florida, United States*

Wednesday, October 29, 2025

06:30 PM-08:00 PM

Grand Ballroom

SESSION EA: COMPACT EUV SOURCES: EXCEPTIONAL NEW TOOLS FOR ULTRAFAST SPIN DYNAMICS

Chair(s): D. A. Arena, *Physics, University of South Florida, Tampa, Florida, United States*

Thursday, October 30, 2025

08:30 AM-12:00 PM

Grand Ballroom

08:30 AM-09:06 AM

EA-01. Probing Spin Textures and Dynamics using Ultrafast EUV and Soft X-Ray Sources

M. M. Murnane

JILA and Physics, University of Colorado, Boulder, Colorado, United States

09:06 AM-09:42 AM

EA-03. Magnetization Dynamics in Transition Metal Films with Low Perpendicular Magnetic Anisotropy

B. Vodungbo¹, E. Jal¹, M. Hennes³, R. Delaunay¹, J. Milano², F. Fortuna⁵, M. Marangolo³, M. Eddrief³, J. Dubois^{1,4}, G. Lambert⁴

¹Laboratoire de Chimie Physique – Matière et Rayonnement, Sorbonne Université – CNRS, Paris, France, ²Instituto de Nanociencia y Nanotecnología, CNEA – CONICET, Bariloche, Argentina, ³Institut des Nanosciences de Paris, Sorbonne Université – CNRS, Paris, France, ⁴Laboratoire d'Optique Appliquée, ENSTA – CNRS – École Polytechnique, Palaiseau, France, ⁵Institut des Sciences Moléculaires d'Orsay, Université Paris-Saclay – CNRS, Orsay, France

09:42 AM-10:18 AM

EA-04. Electron dynamics in two-dimensional semiconductors and spinel ferrites at the NSF-NeXUS user facility

R. Kawakami

NSF-NeXUS and Department of Physics, The Ohio State University, Columbus, Ohio, United States

10:18 AM-10:45 AM

Break

10:45 AM-11:21 AM

EA-05. Revealing domain wall stability during ultrafast demagnetization with subwavelength EUV imaging

H. Chang¹, S. Zayko¹, T. Schmidt², O. Kfir³, M. Sivis^{1,4}, J. H. Mentink⁵, M. Albrecht², C. Ropers^{1,4}

¹Max Planck Institute for Multidisciplinary Sciences, Göttingen, Germany, ²Institute of Physics, University of Augsburg, Augsburg, Germany, ³School of Electrical Engineering, Tel Aviv University, Tel Aviv, Israel, ⁴4th Physical Institute, University of Göttingen, Göttingen, Germany, ⁵Institute for Molecules and Materials, Radboud University, Nijmegen, Netherlands

11:21 AM-11:57 AM

Panel Discussion

SESSION EB: ALTERMAGNETIC MATERIALS

Chair(s): Q. Liu, *Physics, Southern University of Science and Technology, Shenzhen, Guangdong, China*

Thursday, October 30, 2025

08:30 AM-12:00 PM

Ballroom A

08:30 AM-09:06 AM

EB-01. Altermagnetic electronic and magnetic structure explored in MnTe

P. Wadley¹, T. Jungwirth^{1,2}, O. Amin¹

¹School of Physics and Astronomy, University of Nottingham, Nottingham, Nottinghamshire, United Kingdom, ²nanospintronics, Institute of Physics ASCR, Praha, Czechia

09:06 AM-09:42 AM

EB-02. Mn₅Si₅: A Case Study in Altermagnetic Materials

L. Michez¹, J. Rial², M. Leiviska³, H. Reichlova³, D. Kriegner³, A. Badura³, I. Kounta¹, M. Petit¹, G. Skobjin⁴, S. Beckert⁶, E. Schmoranzero⁵, O. Gomonay⁷, A. Thomas⁶, R. Lopes Seeger², L. Smejkal⁷, J. Sinova⁷, S. Goennenwein⁴, T. Jungwirth³, V. Baltz²
¹CINaM-CNRS, Aix Marseille University, Marseille, France, ²Univ. Grenoble Alpes, CNRS, CEA, Grenoble INP, Spintec, Grenoble, France, ³Institute of Physics, Czech Academy of Science, Prague, Czechia, ⁴Fachbereich Physik, Universität Konstanz, Konstanz, Germany, ⁵Faculty of Mathematics and Physics, Charles University, Prague, Czechia, ⁶Leibniz-Institut für Festkörper- und Werkstoffforschung, Dresden, Germany, ⁷Institut für Physik, Johannes Gutenberg Universität, Mainz, Germany

09:42 AM-10:18 AM

EB-03. Three-dimensional mapping of the altermagnetic spin splitting in CrSb

Y. Liu, G. Yang
 Physics, Zhejiang University, Hangzhou, Zhejiang Province, China

SESSION EC: MODELING AND MACHINE LEARNING

Co-Chair(s): F. M. Abel, *Physics, United States Naval Academy, Annapolis, Maryland, United States* and S. Amara, *CEMSE, King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia*

Thursday, October 30, 2025

08:30 AM-12:00 PM

Ballroom C

08:30 AM-08:42 AM

EC-01. Theory of Magnetization Dynamics Beyond the Landau-Lifshitz-Gilbert Equation

C. M. Webb, S. Zhang
 Physics, University of Arizona, Tucson, Arizona, United States

08:42 AM-08:54 AM

EC-02. Reduction of materials criticality in hybrid manufacturing of Halbach arrays using sintered NdFeB magnets and additively manufactured soft magnet frames

L. Cosgrove, T. Lamichhane
 Engineering & Physics, University of Central Oklahoma, Edmond, Oklahoma, United States

08:54 AM-09:06 AM

EC-03. Exploration of Novel Fe₃Pt Structures for Application as Magnetic Materials: A Density Functional Theory Study

N. L. Lethole
 Physics, University of Fort Hare, Alice, Eastern Cape, South Africa

09:06 AM-09:18 AM

EC-04. Field-assisted thermal fluctuation in non-collinear antiferromagnet Mn₃Sn

S. Qian, A. Shukla, S. Rakheja
 Electrical and Computer Engineering, University of Illinois Urbana Champaign, Champaign, Illinois, United States

09:18 AM-09:30 AM

EC-05. Synchronization of spin transfer torque oscillators via magnetoelastic interactions

E. Savostin^{1,2}, V. Lomakin^{3,2,1}
¹Program in Materials Science and Engineering, University of California San Diego, San Diego, California, United States, ²Center for Memory and Recording Research, University of California San Diego, San Diego, California, United States, ³Department of Electrical and Computer Engineering, University of California San Diego, San Diego, California, United States

09:30 AM-09:42 AM

EC-06. Wave equation formulation for spin wave propagation in thin magnetic films

K. Rivkin

RKMAG Corporation, Pacific Grove, California, United States

09:42 AM-09:54 AM

EC-07. Temperature and Thickness Dependence of Gilbert Damping in CoFe thin films: Atomistic Study

P. Sharma¹, E. Sampson², G. Luepke¹

¹*Applied Science, William and Mary, Williamsburg, Virginia, United States*, ²*Physics, William and Mary, Williamsburg, Virginia, United States*

09:54 AM-10:06 AM

EC-08. Machine Learning Force-Field Models for Large-Scale Dynamical Simulations of Itinerant Electron Magnets

G. Chern¹, S. Zhang¹, Y. Fan¹, K. Shimizu²

¹*Physics, University of Virginia, Charlottesville, Virginia, United States*, ²*RIKEN Center for Emergent Matter Science, Saitama, Japan*

10:06 AM-10:18 AM

EC-11. Micromagnetic Simulations of Magnon-Phonon Coupling Dynamics

F. Millo¹, A. Sharma¹, D. Stoeffler², J. Duquesne¹, P. Rovillain¹, M. Marangolo¹

¹*Physics, Sorbonne University, Paris, Ile-de-France, France*, ²*Physics, Strasbourg University, Strasbourg, France*

10:18 AM-10:30 AM

EC-12. Micromagnetic modelling and simulation of inertial spin waves in ferromagnetic nanodots

M. d'Aquino, S. Perna, C. Serpico

Department of Electrical Engineering and Information Technology, University of Naples Federico II, Naples, Italy

10:30 AM-10:42 AM

EC-14. Interlayer and interfacial Dzyaloshinskii-Moriya interaction in magnetic trilayers: First-principles and micromagnetic calculations

E. Y. Vedmedenko

Physics, University of Hamburg, Hamburg, Germany

SESSION ED: SPIN-CHARGE INTERCONVERSION AND MAGNETOTransport

Chair(s): M. H. Guimaraes, *University of Groningen, Groningen, Netherlands*

Thursday, October 30, 2025

08:30 AM-12:00 PM

Ballroom B

08:30 AM-09:06 AM

ED-01. Advancing Transistors via Spin-to-Charge Current Conversion in 3D and 2D Ferroelectric Chalcogenides

C. Rinaldi

Physics, Politecnico di Milano, Milano, Italy

09:06 AM-09:18 AM

ED-02. Orbital-to-Spin Conversion Material Exploration for Improving SOT-MTJ Performances

M. Biagi¹, C. C. Capriata¹, L. Hutin², B. Viala², R. Sousa¹, K. Garello¹

¹*SPINTEC, CEA, Grenoble, Isere, France*, ²*Leti, CEA, Grenoble, Isere, France*

09:18 AM-09:30 AM

ED-04. Interfacial orbital transmission and mechanical torque in metals

C. Sun, [A. Manchon](#)

Aix-Marseille Université, CNRS, CINaM, Marseille, France

09:30 AM-09:42 AM

ED-05. Anisotropic orbital Hall effect in an epitaxial titanium

[S. Karube](#)¹, Y. Yahagi², Y. Saito³, R. Hisatomi¹, Y. Shiota¹, T. Ono¹

¹Kyoto University, Uji, Kyoto, Japan, ²NEC corporation, Minato-ku, Tokyo, Japan, ³Tohoku University, Sendai, Miyagi, Japan

09:42 AM-09:54 AM

ED-06. Absence of large spin-charge conversion in Bi_{1-x}Sb_x alloys

[R. Zhang](#), W. Lin

Key Laboratory of Quantum Materials and Devices of Ministry of Education, School of Physics, Southeast University, Nanjing, China

09:54 AM-10:06 AM

ED-07. Antiferromagnetic spin dynamics revealed by effective magnetization increase on exchange-coupled ferromagnet

[C. Gonzalez-Fuentes](#)¹, P. Landeros², J. W. Gonzalez³, S. Oyarzún⁴, R. Rodriguez¹, R. Gallardo²

¹Instituto de Física, Pontificia Universidad Católica de Chile, Santiago, RM, Chile, ²Departamento de Física, Universidad Técnica Federico Santa María, Valparaíso, V, Chile, ³Departamento de Física, Universidad de Antofagasta, Antofagasta, Antofagasta, Chile, ⁴Departamento de Física, Universidad de Santiago, Santiago, RM, Chile

10:06 AM-10:18 AM

ED-08. Field-free spin-orbit torque switching via spin-reorientation in synthetic antiferromagnets

[B. Jamshed](#), M. Ramu, D. Kumar, H. Rahaman, S. Das, S. Piramanayagam

School of Mathematics and Physics, Nanyang Technological University, Singapore, Singapore, Singapore

10:18 AM-10:45 AM

Break

10:45 AM-10:57 AM

ED-09. Distortion-Aware Magnetic Symmetry Groups: A Versatile Framework for Identifying Altermagnets and Predicting their Unconventional Properties

[M. D. Kitcher](#), B. Lee, G. Beach

Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts, United States

10:57 AM-11:09 AM

ED-10. Observation of D'yakonov-Perel'-type Magnon Spin Relaxation in Uniaxial Antiferromagnetic Insulators

Q. Gao^{1,4}, A. Cong², B. Liang³, M. Yang¹, J. Liu¹, S. Wu³, K. Shen², [J. Li](#)¹

¹Southern University of Science and Technology, Shenzhen, China, ²Beijing Normal University, Beijing, China, ³Fudan University, Shanghai, China, ⁴Quantum Science Center of Guangdong-Hong Kong-Macao Greater Bay Area (Guangdong), Shenzhen, China

11:09 AM-11:21 AM

ED-11. Disentangling thermal contributions to the spin-orbit torque switching of a chiral antiferromagnet

[T. Matsuo](#)^{4,1}, T. Higo^{4,2,3}, H. Tsai⁴, D. Nishio-Hamane⁴, T. Matsuda⁵, K. Kondou⁵, S. Miwa⁴, Y. Otani^{4,6}, S. Nakatsuji^{4,1,7}

¹Johns Hopkins University, Baltimore, Maryland, United States, ²JST-PRESTO, Tokyo, Japan, ³Keio University, Yokohama, Japan, ⁴The University of Tokyo, Tokyo, Japan, ⁵Osaka University, Osaka, Japan, ⁶RIKEN, Saitama, Japan, ⁷CIFAR, Toronto, Ontario, Canada

11:21 AM-11:33 AM

ED-13. Chiral Magnets

R. Winkler^{1,2}, U. Zülicke³

¹Physics, Northern Illinois University, DeKalb, Illinois, United States, ²Materials Science Division, Argonne National Laboratory, Lemont, Illinois, United States, ³School of Chemical and Physical Sciences, Victoria University of Wellington, Wellington, New Zealand

SESSION EE: MAGNONICS II: CRYSTALS & DEVICES

Chair(s): R. Hertel, *Institut de Physique et Chimie des Matériaux de Strasbourg, Centre National de la Recherche Scientifique, Strasbourg, France*

Thursday, October 30, 2025

08:30 AM-12:00 PM

Room 2DE

08:30 AM-08:42 AM

EE-02. Magnon-magnon interaction stimulated by the vertical dynamic coupling in a hybrid magnonic crystal

R. Sultana¹, M. T. Kaffash¹, G. Gubbiotti², Y. Ji¹, B. Jungfleisch¹, F. Montoncello³

¹Department of Physics and Astronomy, University of Delaware, Newark, DE 19716, Delaware, United States, ²CNR-Istituto Officina dei Materiali (IOM), Unità di Perugia, Perugia I-06123, Italy, ³Department of Physics and Earth Sciences, University of Ferrara, Ferrara I-44121, Italy

08:42 AM-09:18 AM

EE-03. Scalable and Programmable Spin Hall Nano-Oscillator Networks: From Phase-Tunable Synchronization to Networks of 100,000 nano-oscillators

A. Kumar^{1,2}, A. Chaurasiya¹, V. Gonzalez¹, N. Behera¹, R. Khymyn¹, A. A. Awad^{1,2}, J. Akerman^{1,2}

¹Department of Physics, University of Gothenburg, Gothenburg, Sweden, ²RIEC and CSIS, Tohoku University, Japan, Sendai, Japan

09:18 AM-09:30 AM

EE-04. Strong coupling between spin waves and microwave photons in a superconducting resonator

Y. Li¹, J. Lim², T. Polakovic³, C. Kiehl^{1,4}, R. Divan⁵, U. Welp¹, C. Phatak¹, J. Zuo², A. Hoffmann², V. Novosad¹

¹Materials Science Division, Argonne National Laboratory, LEMONT, Illinois, United States, ²Materials Science Engineering, University of Illinois at Urbana Champaign, Urbana, Illinois, United States, ³Physics Division, Argonne National Laboratory, LEMONT, Illinois, United States, ⁴Physics Department, Carthage College, Kenosha, Wisconsin, United States, ⁵Center for Nanoscale Materials, Argonne National Laboratory, LEMONT, Illinois, United States

09:30 AM-09:42 AM

EE-05. Experimental Observation of Magnetic Rogue Waves

K. H. McAllister¹, M. Copus¹, C. Abbott¹, M. Elo², J. Netzer², E. Iacocca¹, R. E. Camley¹, D. A. Bozhko¹

¹Department of Physics and Energy Science, University of Colorado Colorado Springs, Colorado Springs, Colorado, United States,

²Tabor Electronics, Inc., Nesher, Israel

09:42 AM-09:54 AM

EE-06. Monolithic magnetic MEMS integration on a magnonic device

S. Manton¹, R. Lebrun¹, H. Merbouche², I. Boventer¹, P. Che¹, J. Ben Youssef³, P. Bortolotti¹, P. Martins⁴, A. Anane¹

¹Laboratoire Albert Fert, CNRS, Thales, Université Paris-Saclay, Palaiseau, France, ²Service de Physique de l'État Condensé, CEA, CNRS, Université Paris-Saclay, Gif-sur-Yvette, France, ³LabSTICC, CNRS, Université de Bretagne Occidentale, Brest, France, ⁴Thales Research and Technology, Palaiseau, France

09:54 AM-10:06 AM

EE-07. Polarization Selective Quantum Sensing of Spin Wave

E. Zhang^{1,3}, T. Zheng^{1,3}, B. Yang^{1,3}, S. Nallan^{1,3}, M. Ku², J. Zhu^{1,3}

¹Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, Pennsylvania, United States, ²University of Delaware, Newark, Delaware, United States, ³Data Storage System Center, Carnegie Mellon University, Pittsburgh, Pennsylvania, United States

10:06 AM-10:18 AM

EE-08. Sustained Amplification of Coherent Spin-waves by Parametric Pumping with Surface Acoustic Waves

P. Dhagat¹, A. Jander¹, C. Rivard²

¹Electrical Engineering and Computer Science, Oregon State University, Corvallis, Oregon, United States, ²Intel Corp., Hillsboro, Oregon, United States

10:18 AM-10:45 AM

Break

10:45 AM-10:57 AM

EE-09. Quantum Micromagnetic Theory of Magnons in Finite Nanostructures

C. Serpico, S. Perna, M. d'Aquino

Department of Electrical Engineering and Information technology, University of Naples Federico II, Naples, Italy

10:57 AM-11:09 AM

EE-11. Bringing Light into the Landau-Lifshitz-Gilbert Equation: Consequences of its Fractal Non-Markovian Memory Kernel for Optically Induced Magnetic Inertia and Magnons

F. Reyes-Osorio, B. Nikolić

Physics and Astronomy, University of Delaware, Newark, Delaware, United States

11:09 AM-11:21 AM

EE-12. Spontaneous Emergence of Phase Coherence in a Quasiparticle Bose-Einstein Condensate

M. Koster², M. R. Schweizer², T. B. Noack², V. I. Vasyuchka², B. Hillebrands², M. Weiler², A. A. Serga², G. von Freymann^{2,3}, D. A. Bozhko¹

¹Center for Magnetism and Magnetic Nanostructures, University of Colorado Colorado Springs, Colorado Springs, Colorado, United States, ²Department of Physics and Research Center OPTIMAS, RPTU Kaiserslautern-Landau, Kaiserslautern, Germany, ³Fraunhofer Institute for Industrial Mathematics ITWM, Kaiserslautern, Germany

11:21 AM-11:33 AM

EE-13. Squeezed Vacuum and Entanglement in Nonperturbative Cavity Magnonics with Soft Magnons

T. Chiba^{1,2}, R. Suzuki², T. Otaki², H. Matsueda^{2,3}

¹Department of Information Science and Technology, Graduate School of Science and Engineering, Yamagata university, Yonezawa, Japan, ²Department of Applied Physics, Graduate School of Engineering, Tohoku university, Sendai, Japan, ³Center for Science and Innovation in Spintronics, Tohoku university, Sendai, Japan

SESSION EF: SPIN AND MAGNETISM IN VAN DER WAALS LAYERED MATERIALS

Chair(s): P. de Faria Junior, *Department of Physics, University of Central Florida, Orlando, Florida, United States*

Thursday, October 30, 2025

08:30 AM-12:00 PM

Room 2BC

08:30 AM-09:06 AM

EF-01. Gate-tunable in-plane spin lifetime anisotropy via proximity-induced spin-orbit coupling in low-symmetry graphene-based heterostructures

J. F. Sierra¹, J. Svetlik^{1,2}, W. Savero-Torres¹, L. Camosi¹, F. Herling¹, T. Guillet¹, K. Xu³, J. Reparaz³, V. Marinova⁴, D. Dimitrov^{4,5}, S. O. Valenzuela^{1,6}

¹*Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and The Barcelona Institute of Science and Technology (BIST), Barcelona, Spain*, ²*Universitat Autònoma de Barcelona, Barcelona, Spain*, ³*Institut de Ciència de Materials de Barcelona, ICMAB-CSIC, Barcelona, Spain*, ⁴*Institute of Optical Materials and Technologies, Bulgarian Academy of Science, Sofia, Bulgaria*, ⁵*Institute of Solid State Physics, Bulgarian Academy of Sciences, Sofia, Bulgaria*, ⁶*Institució Catalana de Recerca i Estudis Avançats (ICREA), Barcelona, Spain*

09:06 AM-09:18 AM

EF-03. Control of magnetic order in quasi-2D magnets by external perturbations: microscopic understanding

K. Carva, K. Pokhrel, S. Ray, P. Qureshi

DCMP, Charles University, Prague, Czechia

09:18 AM-09:30 AM

EF-05. Nitrogen-Vacancy Magnetometry of Edge Magnetism in Pristine and Fe Implanted WS₂ Flakes

I. Fescenko¹, R. Kumar², T. Gas-osoith^{5,3,4}, Y. Wang^{5,3}, S. Lamichhane⁵, T. Li⁵, A. Erickson⁵, T. Delord², C. Cress⁶, N. Proscia⁶, S. LaGasse^{6,7}, S. Liou⁵, X. Hong⁵, J. Fonesca⁶, T. An³, C. Meriles², A. Laraoui⁵

¹*University of Latvia, Riga, Latvia*, ²*CUNY-City College of New York, New York, New York, United States*, ³*Japan Advanced Institute of Science and Technology, Nomi, Japan*, ⁴*University of Phayao, Mae Ka, Thailand*, ⁵*University of Nebraska-Lincoln, Lincoln, Nebraska, United States*, ⁶*US Naval Research Laboratory, Washington, District of Columbia, United States*, ⁷*Laboratory for Physical Sciences, College Park, Maryland, United States*

09:30 AM-09:42 AM

EF-06. Impacts of alloying and finite thickness on ferromagnetism in kagome Fe₃Sn₂ heterostructures

S. May¹, P. M. Laxmeesha¹, R. Dutta¹, T. Tandon¹, A. Velic¹, R. K. Rai², E. A. Stach², S. Sheikh³, U. M. Jayathilake³, A. X. Gray³, T. Charlton⁴, C. Jensen⁵, J. Borchers⁵, A. J. Grutter⁵

¹*Materials Science and Engineering, Drexel University, Philadelphia, Pennsylvania, United States*, ²*Materials Science and Engineering, University of Pennsylvania, Philadelphia, Pennsylvania, United States*, ³*Department of Physics, Temple University, Philadelphia, Pennsylvania, United States*, ⁴*Oak Ridge National Laboratory, Oak Ridge, Tennessee, United States*, ⁵*NIST Center for Neutron Research, National Institute of Standards and Technology, Gaithersburg, Maryland, United States*

09:42 AM-09:54 AM

EF-07. Spin Waves in a Bilayer Kagome Ferromagnet Fe₃Sn₂

Y. Soh

Paul Scherrer Institut, Villigen, Switzerland

09:54 AM-10:30 AM

EF-08. Engineering Magnetic Transition Metal Chalcogenide-Based Quantum Interfaces

H. Chi

University of Ottawa, Ottawa, Ontario, Canada

10:30 AM-10:42 AM

EF-09. Intrinsic Non-linear Hall Effect

F. Xue, S. Ahmad

Physics Department, University of Alabama at Birmingham, Birmingham, Alabama, United States

10:42 AM-10:54 AM

EF-10. Studying the Effect of Nb Doping on the Magnetic Properties of CrTe₂ Crystals

D. R. Lawati¹, J. Kumar¹, P. Karki², K. Prasad², M. A. Elekhtiar¹, S. Lamichhane¹, B. Tiwari¹, K. Huang¹, Z. Hubble², J. Watt³, S. Liou¹, E. Y. Tsymbal¹, J. Wang², K. Ambal², A. Laraoui¹

¹University of Nebraska-Lincoln, Lincoln, Nebraska, United States, ²Wichita State University, Wichita, Kansas, United States, ³Los Alamos National Laboratory, Albuquerque, New Mexico, United States

10:54 AM-11:06 AM

EF-11. Fe₃GeTe₂ single crystals with varying Fe content probed by x-ray spectroscopy

D. Backes¹, R. Fujita², L. Veiga¹, D. Mayoh³, G. Wood³, S. S. Dhesis¹, G. Balakrishnan³, G. van der Laan¹, T. Hesjedal²

¹Diamond Light Source, Didcot, United Kingdom, ²Clarendon Laboratory, University of Oxford, Oxford, United Kingdom, ³Department of Physics, University of Warwick, Coventry, United Kingdom

SESSION EG: ADVANCED MAGNETIC RECORDING TECHNOLOGIES

Chair(s): A. Venugopal, *Seagate Research, Seagate Technology, Edina, Minnesota, United States*

Thursday, October 30, 2025

08:30 AM-12:00 PM

Room 2A

08:30 AM-08:42 AM

EG-01. Quantifying Erasure and Interference from Adjacent Tracks in Heat-Assisted Magnetic Recording

S. Zheng, W. R. Eppler, J. Loven, J. Gadbois

Seagate Technology, Bloomington, Minnesota, United States

08:42 AM-08:54 AM

EG-02. Detection of In-Plane Magnetized Grains with a Magnetoresistive Head

Y. Chen, R. H. Victora

University of Minnesota, Minneapolis, Minnesota, United States

08:54 AM-09:06 AM

EG-03. The impact of in-plane grains on Heat Assisted Magnetic Recording performance and THMap metrics

N. A. Natekar, P. Jubert, T. Olson, A. Goncharov, R. Brockie, K. Tanahashi

Western Digital, San Jose, California, United States

09:06 AM-09:18 AM

EG-04. Dependence of Microstructure and Grain Density on Nucleation Layer Thickness in L1₀ FePt-*h*BN Granular Thin Films

J. Chang^{1,2}, A. K. Gribik^{1,2,3}, O. R. Peterson^{1,2,4}, B. L. Reese^{1,2}, D. E. Laughlin^{1,2,5}, J. Zhu^{1,2,5}

¹Data Storage Systems Center, Carnegie Mellon University, Pittsburgh, Pennsylvania, United States, ²Materials Science and Engineering, Carnegie Mellon University, Pittsburgh, Pennsylvania, United States, ³Computational and Chemical Sciences, Carlow University, Pittsburgh, Pennsylvania, United States, ⁴Physics, Kenyon College, Gambier, Ohio, United States, ⁵Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, Pennsylvania, United States

09:18 AM-09:30 AM

EG-05. Microstructure and Magnetic properties of high-density $L1_0$ -FePt grains on an electrically conductive (Mg,Ti)O underlayer for HAMR media.

D. Angayarkanni Ramamurthy¹, H. Sepehri-Amin¹, I. Suzuki¹, Y. K. Takahashi^{1,2}

¹Research Centre for Magnetic and Spintronic Materials, national Institute for Materials Science, Tsukuba, Ibaraki, Japan, ²Research Institute of Electrical Communications, Tohoku University, Sendai, Tohoku, Japan

09:30 AM-09:42 AM

EG-06. Thermal spin-torque heat-assisted magnetic recording

S. Isogami¹, Y. Sasaki¹, Y. Fan², Y. Kubota³, J. Gadbois², K. Hono¹, Y. K. Takahashi¹

¹NIMS, Tsukuba, Japan, ²Seagate Technology, Minneapolis, Minnesota, United States, ³Seagate Technology, Fremont, California, United States

09:42 AM-09:54 AM

EG-07. Vector Recording: Advancing Areal Density in Heat-Assisted Magnetic Recording with Innovative Reader Designs

K. Hosen¹, R. H. Victora^{1,2}

¹Department of Electrical and Computer Engineering, University of Minnesota Twin Cities, Minneapolis, Minnesota, United States,

²Department of Physics, University of Minnesota Twin Cities, Minneapolis, Minnesota, United States

09:54 AM-10:06 AM

EG-08. First-principles exploration of Cu-X spacers to enhance magnetoresistance in CPP-GMR read head for next generation HDD

K. Simalaotao^{1,2}, I. Kurniawan², Y. Miura^{3,2}, Y. Sakuraba^{1,2}

¹Graduate School of Pure and Applied Sciences, University of Tsukuba, Tsukuba, Ibaraki, Japan, ²Research Center for Magnetic and Spintronic Materials, National Institute for Materials Science, Tsukuba, Ibaraki, Japan, ³Faculty of Electrical Engineering and Electronics, Kyoto Institute of Technology, Kyoto, Kyoto, Japan

10:06 AM-10:18 AM

EG-09. In-Plane Magnetization Switching in Spin Valves Using Optically Excited Spin Currents

J. Lin¹, Y. L. Guen¹, J. Hohlfeld¹, J. Igarashi¹, Q. Remy², J. Gorchon¹, G. Malinowski¹, S. Mangin¹, T. Hauet¹, M. Hehn¹

¹Institut Jean Lamour, Nancy, France, ²Freie Universität Berlin, Berlin, Germany

10:18 AM-10:45 AM

Break

10:45 AM-10:57 AM

EG-10. Magneto-structural characterization and THz emission enhancement in ultrathin Fe/ $L1_0$ -FePt/Pt heterostructures

O. Crisan

National Institute for Materials Physics, Bucharest, Romania

10:57 AM-11:09 AM

EG-11. High resolution spin wave based magnetic reader

K. Rivkin

RKMAG Corporation, Pacific Grove, California, United States

11:09 AM-11:21 AM

EG-12. Laser induced magnetization reversal in Co-Rare Earth alloys

B. Kunyanguyen¹, G. Malinowski¹, D. Lacour¹, J. Lin¹, Y. L. Guen¹, L. D. Buda-Prejbeanu², S. Mangin¹, J. Gorchon¹, M. Hehn¹

¹Institute Jean-Lamour, Nancy, France, ²SPINTEC, Grenoble, France

11:21 AM-11:33 AM

EG-13. CNN/DNN approximation of the recording process coupled with DNN accelerated solution for the magnetization reversal

K. Rivkin

RKMAG, Pacific Grove, California, United States

SESSION EP: SPIN AND ORBITAL DYNAMICS (POSTER SESSION)

Chair(s): G. Choi, *Department of Energy Science, Sungkyunkwan University College of Natural Science, Suwon, Korea (the Republic of)*

Thursday, October 30, 2025

09:00 AM-12:00 PM

Exhibit Hall Posters

EP-02-LB. A High Performance Finite Element Approach to Linear and Nonlinear Magnetostatic Modeling

J. Brown, D. Faircloth

IERUS Technologies, Inc., Huntsville, Alabama, United States

EP-03-LB. Understanding the Line Shape of Ferromagnetic Resonance Spectrum in a Flip-Chip Measurement

E. D. DeVisscher, A. E. Mays, X. Fan

Physics and Astronomy, University of Denver, Denver, Colorado, United States

EP-05-LB. Bilinear magnetoresistance in conventional heterostructures

D. Kim¹, K. Kim², J. Jeong³, K. Lee⁴, H. Yang⁵

¹Department of Materials Science and Engineering, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea (the Republic of), ²Department of Physics, Yonsei University, Seoul, Korea (the Republic of), ³Department of Materials Science and Engineering, Chungnam National University, Daejeon, Korea (the Republic of), ⁴Department of Physics, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea (the Republic of), ⁵Department of Electrical and Computer Engineering, National University of Singapore (NUS), Singapore, Singapore

EP-08-LB. Orbital dynamics of hybrid bosonic quasiparticles in magnetic systems

D. To, M. Doty

University of Delaware, Newark, Delaware, United States

SESSION EQ: TRANSFORMERS AND POWER ELECTRONICS II (POSTER SESSION)

Co-Chair(s): C. Chinnasamy, *Manufacturing Science Division, Oak Ridge National Laboratory, Knoxville, Tennessee, United States*
and P. Kulik, *University of Central Florida, Orlando, Florida, United States*

Thursday, October 30, 2025
09:00 AM-12:00 PM
Exhibit Hall Posters

EQ-01. Design for AC Loss Reduction in PCB Motors Using Magnet Chamfering

J. Lee, Y. Lee, H. Kim, Y. Lim, W. Kim
Gachon University, Seongnamsi, Korea (the Republic of)

EQ-02. Optimal Design of a Support Structure to Enhance Counter-Torque Resistance in a Block-Coil-Type Compact Urban Wind Turbine Generator

H. Kim, Y. Lee, D. Choi, J. Lee, W. Kim
Gachon University, Seongnam-si, Gyeonggi-do, Korea (the Republic of)

EQ-03. Force Characterization and Axis Transformation of a Fixed-Bias Flux Three-Phase Magnetic Bearing

S. Noh, S. Byun, J. Kim, J. Park, H. Cho
Chungnam National University, Daejeon, Korea (the Republic of)

EQ-04. Study on the Reduction of Eddy Current Loss of Permanent Magnet Synchronous Motor considering PWM

Y. Lee¹, Y. Lim², J. Lee², H. Kim¹, W. Kim³
¹*Department of Next Generation Energy System Convergence, Gachon University, Seongnam-Si, Korea (the Republic of)*, ²*Department of Electrical Engineering, Gachon University, Gyeonggi-do, Korea (the Republic of)*, ³*Department of Electrical Engineering, Gachon University, Seongnam-Si, Korea (the Republic of)*

EQ-05. Design of Magnetization Yoke to Reduce the number of Double Spoke Type PMSM Magnetization Using I-Core

D. Choi, J. Lee, H. Kim, Y. Lim, W. Kim
Gachon University, Seongnam, Korea (the Republic of)

EQ-06. A Study on Improvement of Magnetization Performance and Torque Ripple through Magnet Shape Modification in Double-Spoke Type PMSM

S. Kim, H. Kim, D. Choi, J. Lee, W. Kim
Gachon University, Seongnam-si, Korea (the Republic of)

EQ-08. Iron Loss Calculation Method for Large-Capacity AC Filter Inductors Considering Non-Uniform Magnetic Flux Density

H. Matsumori¹, T. Yamaguchi¹, N. Kobayashi¹, K. Wada², K. Takano²
¹*Nagoya institute of technology, Nagoya, Aichi, Japan*, ²*Tokyo metropolitan university, Hachioji, Tokyo, Japan*

SESSION ER: HARD MAGNETIC MATERIALS II (POSTER SESSION)

Chair(s): S. Okada, *Multi-Material Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Nagoya, Japan*
 Thursday, October 30, 2025
 09:00 AM-12:00 PM
 Exhibit Hall Posters

ER-01. Altering Solidification Kinetics in Nd-Fe-B Alloys through Alloying Additions for 3D-Printable Magnets

S. Krishnan, Q. Guo, J. Shield
MME, University of Nebraska - Lincoln, Lincoln, Nebraska, United States

ER-03. Chemical bond and phase stability of Ga-doped $\text{Sm}_2\text{Fe}_{17}\text{C}_x$ Magnet

X. Liu, C. I. Nlebedim
Ames National Laboratory, Ames, Iowa, United States

ER-04. Tuning the Intrinsic Magnetic Properties of $\text{Sm}(\text{Fe}_{1-x}\text{Co}_x)_{10}\text{V}_2$ Compounds with the ThMn_{12} -type Structure

X. Zheng, P. Si, B. Zhang, Y. Song, J. Park
Korea Institute of Materials Science, Changwon, Korea (the Republic of)

ER-05. Magnetic properties and element site occupation of Zn-substituted W-type hexagonal ferrites

T. Nakagawa, K. Ota, A. Yonaga, S. Seino
The University of Osaka, Suita, Japan

ER-06. Process-driven Microstructure Control in Additively Manufactured Alnico Permanent Magnets

A. R. Duong¹, I. M. Smith¹, O. Bishop¹, C. Mayer¹, K. Snyder², R. Barua¹
¹*Virginia Commonwealth University, Richmond, Virginia, United States*, ²*Commonwealth Center for Advanced Manufacturing, Disputanta, Virginia, United States*

ER-07. Enhanced magnetic anisotropy in $(\text{Fe}_{0.7-x}\text{Co}_{0.3}\text{Zr}_x)_2\text{B}$ Nanocrystallites

P. Joshi¹, H. Abbas¹, T. Karki¹, J. Mohapatra¹, X. Liu², P. Liu¹
¹*Physics, The University of Texas at Arlington, Arlington, Texas, United States*, ²*Ames Laboratory, Critical Materials Institute, Ames, Iowa, United States*

ER-08. High Anisotropy Field in Fe_3CoB_2 Nanocrystallite Ribbons

H. Abbas¹, P. Joshi¹, T. Karki¹, J. Mohapatra¹, X. Liu², P. Liu¹
¹*Physics, The University of Texas at Arlington, Arlington, Texas, United States*, ²*Ames Laboratory, Critical Materials Institute, Ames, Iowa, United States*

ER-09. Prediction, Synthesis, and Experimental Validation of Magnetic Order and Dimensionality in Cerium-Based Compounds Guided by Structural Characteristics and Tri-critical Exponents

J. A. Torres, T. Lamichhane, A. S. Poulo
Engineering Physics, University of Central Oklahoma, Oklahoma City, Oklahoma, United States

ER-10. Effect of Mn and V Doping on the Structural and Magnetic Properties of Fe_{16}N_2 Thin Films

E. Gokce-Polat¹, A. DeRuiter², W. Echtenkamp¹, H. Kim¹, B. Wolf², J. Wang^{1,2}
¹*Department of Electrical and Computer Engineering, University of Minnesota, Minneapolis, Minnesota, United States*, ²*Department of Chemical Engineering and Materials Science, University of Minnesota, Minneapolis, Minnesota, United States*

ER-12. Controlling L1₀ Ordering in the MnAl System Through Cu Elemental Addition

H. Baldino^{1,2}, X. Zhang^{1,3}, G. Hadjipanayis¹, L. H. Lewis^{1,3}

¹Chemical Engineering, Northeastern University, Boston, Massachusetts, United States, ²Material Science and Engineering, University of Central Florida, Orlando, Florida, United States, ³Mechanical and Industrial Engineering, Northeastern University, Boston, Massachusetts, United States

ER-13-LB. Tunable magnetic properties for epitaxially grown Co-rich CoPtP films by electrodeposition on Cu(111)/Si substrates: Crossover from non-exchange-spring to exchange spring/coupled magnetic states

S. Seth, S. Roy

Micropower Devices & Nanomagnetism Group, Tyndall National Institute, University College Cork, Cork, Ireland

ER-14-LB. Measuring initial curves and minor hysteresis loops for high coercivity rare earth magnets using the Pulsed Field Magnetometer (PFM) system

J. Mckenzie, R. Cornelius, J. Wade

Hirst Magnetic Instruments Ltd, Falmouth, United Kingdom

MAGNETIC SENSORS CHALLENGE FINAL PRESENTATIONS

Thursday, October 30, 2025

12:15 PM-01:45 PM

Room 1DE

IEEE MAGNETICS SOCIETY STANDARDS COMMITTEE MEETING

Thursday, October 30, 2025

05:00 PM-06:30 PM

Room 1F

SESSION FA: ALL-ORBITRONIC CONCEPTS AND DEVICES

Chair(s): A. Kumar, *Physics, University of Gothenburg, Gothenburg, Sweden*

Thursday, October 30, 2025

02:00 PM-05:30 PM

Grand Ballroom

02:00 PM-02:36 PM

FA-01. Ultrafast Spin-Orbitronics with Terahertz Electromagnetic Pulses

O. Gueckstock

Freie Universität Berlin, Berlin, Germany

02:36 PM-03:12 PM

FA-02. Lanthanide nitride ferromagnets with large orbital magnetic moments

S. Granville^{1,2}

¹Robinson Research Institute, Victoria University of Wellington, Wellington, New Zealand, ²MacDiarmid Institute for Advanced Materials and Nanotechnology, Wellington, New Zealand

03:12 PM-03:48 PM

FA-03. All-Orbitronic Effects and Device Concepts

M. Kläui^{1,2}

¹Institute of Physics, Johannes Gutenberg University Mainz, Mainz, Germany, ²Center for Quantum Spintronics and Department of Physics, NTNU, Trondheim, Norway

03:48 PM-04:15 PM

Break

04:15 PM-04:51 PM

FA-04. Chiral Orbitronics

B. Göbel

Martin Luther University Halle-Wittenberg, Halle, Germany

04:51 PM-05:27 PM

FA-05. Nonlocal Electrical Detection of Reciprocal Orbital Edelstein Effect

W. Gao, L. Liao, Y. Otani

The Institute for Solid State Physics, The University of Tokyo, Kashiwa, Chiba, Japan

SESSION FB: COHERENT X-RAY FOR PROBING THE INTERPLAY OF HETEROGENEITY AND SPIN-ELECTRONIC CORRELATIONS

Co-Chair(s): S. Roy, *Advanced Light Source, Lawrence Berkeley National Laboratory, Berkeley, California, United States* and D. A. Gilbert, *University of Tennessee, Knoxville, Tennessee, United States*

Thursday, October 30, 2025

02:00 PM-05:30 PM

Ballroom A

02:00 PM-02:36 PM

FB-01. Imaging Transient States in Magnetic Materials: Complexity across Space and Time

C. Mazzoli

NSLS-II, Brookhaven National Lab, Upton, New York, United States

02:36 PM-03:12 PM

FB-02. Coherent x-ray studies of spontaneous fluctuations in rare earth nickelates

R. Kukreja

University of California Davis, Davis, California, United States

03:12 PM-03:48 PM

FB-03. Competition between two antiferromagnetic phases in Fe_xNbS_2 studied through Coherent Resonant Scattering

A. Frano¹, R. Basak¹, S. Wu²

¹*University of California San Diego, La Jolla, California, United States*, ²*Santa Clara University, Santa Clara, California, United States*

03:48 PM-04:15 PM

Break

04:15 PM-04:51 PM

FB-05. Dispersion of Spontaneous Spin Fluctuations measured by MHz X-ray Photon Correlation Spectroscopy

L. Shen¹, J. J. Turner¹, S. Roy², Z. Tumbleson², E. Blackburn³

¹*SLAC National Accelerator Laboratory, Menlo Park, California, United States*, ²*Lawrence Berkeley National Laboratory, Berkeley, California, United States*, ³*Lund University, Lund, Sweden*

04:51 PM-05:27 PM

Panel Discussion

SESSION FC: BIOMAGNETISM AND BIOMEDICAL APPLICATIONS III

Co-Chair(s): R. L. Hadimani, *Mechanical and Nuclear Engineering, Virginia Commonwealth University, Richmond, Virginia, United States* and J. Gomez-Pastora, *Texas Tech University, Lubbock, Texas, United States*

Thursday, October 30, 2025

02:00 PM-05:30 PM

Ballroom C

02:00 PM-02:12 PM

FC-01. Validation of the Impact of Cylindrical Sensor Arrays on Cardiac Current Source Estimation Performance

W. Shang¹, M. Fushimi², S. Chikaki¹, M. Sekino¹

¹Graduate School of Engineering, The University of Tokyo, Tokyo, Japan, ²Graduate School of Information science and Technology, The University of Tokyo, Tokyo, Japan

02:12 PM-02:24 PM

FC-02. Design of a High-Frequency Magnetic Particle Spectroscopy Instrument for Applications In Vivo

E. Whittier^{1,2}, J. Beckham^{2,3,4}, N. Kent^{2,4}, P. Anikeeva^{3,2,4}

¹EECS, MIT, Cambridge, Massachusetts, United States, ²RLE, MIT, Cambridge, Massachusetts, United States, ³DMSE, MIT, Cambridge, Massachusetts, United States, ⁴McGovern, MIT, Cambridge, Massachusetts, United States

02:24 PM-02:36 PM

FC-03. Optimal Operating Condition of a Magnetic Helical Robot to Maximize the Kinetic Energy for Tunneling the Clogged Blood Vessel

S. Lee, J. Kwon, J. Sa, G. Jang

Department of Mechanical Convergence Engineering, Hanyang Univ., Seoul, Korea (the Republic of)

02:36 PM-02:48 PM

FC-04. Magnetoencephalographic mapping by optical stimulation of optogenetic rats using Optically pumped magnetometers

K. Komuro¹, M. Fushimi², Y. Kainuma³, T. Zhu¹, S. Funatani¹, S. Chikaki¹, M. Sekino¹

¹Graduate School of Engineering, The University of Tokyo, Tokyo, Japan, ²Graduate School of Information Science and Technology, The University of Tokyo, Tokyo, Japan, ³National Institute of Advanced Industrial Science and Technology, Ibaraki, Japan

02:48 PM-03:00 PM

FC-05. Exploiting the distinct Fe metabolism of breast cancer cells to analyze and separate stem tumor cells

K. Paz Gonzalez¹, L. Nguyen T. Tran¹, R. Farrell², K. Chen², K. Wu³, J. Chalmers⁴, J. Gomez-Pastora¹

¹Chemical Engineering, Texas Tech University, Lubbock, Texas, United States, ²Department of Biological Science, Texas Tech University, Lubbock, Texas, United States, ³Electrical and Computer Engineering, Texas Tech University, Lubbock, Texas, United States, ⁴William G. Lowrie Department of Chemical and Biomolecular Engineering, The Ohio State University, Columbus, Ohio, United States

03:00 PM-03:12 PM

FC-06. Measurement of the concentration of organic molecules in exhaled gas before and after repetitive magnetic or electrical stimulation of rat hindlimb muscle contractions.

R. Takahashi¹, J. Yang¹, G. Kwoun³, H. Yamada³, H. Yamahara¹, S. Funatani¹, I. Mimura³, M. Fushimi², H. Nishi³, H. Tabata¹, M. Nangaku³, M. Sekino¹

¹Graduate School of Engineering, The University of Tokyo, Bunkyo, Tokyo, Japan, ²Graduate School of Information Science and Technology, The University of Tokyo, Bunkyo, Tokyo, Japan, ³Graduate School of Medicine, The University of Tokyo, Bunkyo, Tokyo, Japan

03:12 PM-03:24 PM

FC-07. Development and Phantom-Based Evaluation of a Deep Transcranial Magnetic Stimulation Coil for the Treatment of Psychiatric Disorders

A. Iino¹, W. Lohr², H. M. Kim¹, S. Chikaki¹, M. Fushimi³, R. L. Hadimani⁵, Y. Noda⁴, M. Sekino¹

¹Bioengineering, The University of Tokyo, Tokyo, Japan, ²Biomedical Engineering, Virginia Commonwealth University, Richmond, Virginia, United States, ³Information Physics and Computing, The University of Tokyo, Tokyo, Japan, ⁴Psychiatry, International University of Health and Welfare, Tokyo, Japan, ⁵Mechanical and Nuclear Engineering, Virginia Commonwealth University, Richmond, Virginia, United States

03:24 PM-03:36 PM

FC-08. Rapid Detection of *Fusobacterium Nucleatum* in Saliva using Magnetic Susceptibility

S. Yabukami^{1,2}, T. Murayama¹, A. Ban¹, K. Okita², S. Tohtake¹, L. Tonthat¹, Y. Ozawa¹, S. Asamitsu¹, H. Okamoto¹, T. Kamei¹, T. Abe¹

¹Tohoku University, Sendai, Japan, ²Tohoku-TMIT, Sendai, Japan

03:36 PM-03:48 PM

FC-09. Superparamagnetic Nanoparticles: bridging traditional Characterization up to 1 GHz and Real-World Biosensing Applications

M. Hauwaert¹, R. Hanus¹, S. Spassov³, V. Pilati², R. B. Goldfarb⁴, L. Lejeune⁵, M. Salvador², S. Hermans⁵, M. Rivas², J. Raskin¹

¹ICTEAM, UCLouvain, Louvain La Neuve, Belgium, ²Dept de Fisica Aplicada, Universidad De Oviedo, Gijón, Spain, ³Geophysics Department, IRM-KMI, Dourbes, Belgium, ⁴NIST, Boulder, Colorado, United States, ⁵IMCN, UCLouvain, Louvain La Neuve, Belgium

03:48 PM-04:15 PM

Break

04:15 PM-04:27 PM

FC-10. Additive Manufacturing of Parabolic Ferromagnetic Coils for Transcranial Magnetic Stimulation Using Laser-Based Directed Energy Deposition

D. Mudakavi¹, V. E. Bodur¹, P. J. Udupudi¹, M. Tashli², R. L. Hadimani², S. M. Adinarayanappa¹

¹Additive Manufacturing and 4D Printing lab, Dept of Mechanical Materials and Aerospace Engineering, Indian Institute of Technology, Dharwad, Dharwad, Karnataka, India, ²Biomagnetics lab, Dept of Mechanical and Nuclear Engineering, Virginia Commonwealth University, Virginia, Virginia, United States

04:27 PM-04:39 PM

FC-11. Evaluation of a Geometrically and Conductively Accurate Brain Phantom for Predicting TMS-Induced Electric Fields

M. Paslar¹, W. Lohr¹, T. J. Taylor¹, T. Atalugama², B. Embree², R. L. Hadimani^{2,1}, C. L. Peterson¹

¹Biomedical Engineering, Virginia Commonwealth University, Richmond, Virginia, United States, ²Mechanical and Nuclear Engineering, Virginia Commonwealth University, Richmond, Virginia, United States

04:39 PM-04:51 PM

FC-12. Wearable Magnetic Shielding for the Safe Application of Transcranial Magnetic Stimulation in Patients with Brain Implants

W. Lohr¹, T. Atalugama², B. Embree², H. Shah³, J. Chen³, K. Holloway³, R. L. Hadimani²

¹Biomedical Engineering, Virginia Commonwealth University, Richmond, Virginia, United States, ²Mechanical and Nuclear Engineering, Virginia Commonwealth University, Richmond, Virginia, United States, ³Neurosurgery, Virginia Commonwealth University, Richmond, Virginia, United States

04:51 PM-05:03 PM

FC-13. Magnetic Field Gradient Trapping Efficacy on SH-SY5Y Cancer Cells and Total RNA

B. Gungordu¹, N. Gunduz Akdogan^{3,2}, C. Bagci¹, O. Akdogan^{1,2}

¹Faculty of Engineering and Natural Sciences, Bahcesehir University, Istanbul / Besiktas, Istanbul / Besiktas, Turkey, ²NANOTerial Technology Corporation, Istanbul, Istanbul, Turkey, ³Faculty of Engineering, Piri Reis University, Istanbul, Istanbul, Turkey

05:03 PM-05:15 PM

FC-14. Bioplastics Based on Gelatin–Pectin Blends Enriched with Multifunctional Nanoparticles

B. Gungordu¹, S. Can¹, B. Onat¹, N. Gunduz Akdogan^{2,3}, O. Akdogan^{1,3}

¹Bahcesehir University, Istanbul, Turkey, ²Piri Reis University, Istanbul, Turkey, ³NANOTerial Technology Corporation, Istanbul, Turkey

05:15 PM-05:27 PM

FC-15. Dual-Mode Detection of Magnetic and Dielectric Responses in Core–Shell Nanoparticles for Biomedical Diagnostics

D. Brown¹, D. Luu¹, K. Hwang¹, M. Nguyen², S. Hoijang², T. Lee², M. Phan¹

¹Department of Physics, University of South Florida, Tampa, Florida, United States, ²Department of Chemistry and the Texas Center for Superconductivity, University of Houston, Houston, Texas, United States

SESSION FD: LOW DAMPING AND TOPOLOGICAL SYSTEMS

Co-Chair(s): A. I. Ojo, *Physics, University of South Florida, Tampa, Florida, United States* and E. Thareja, *Department of Physics, University of South Florida, Tampa, Florida, United States*

Thursday, October 30, 2025

02:00 PM-05:30 PM

Ballroom B

02:00 PM-02:36 PM

FD-01. Vertically Graded FeNi Alloys with Low Damping and a Sizeable Spin-Orbit Torque

R. E. Maizel¹, S. Wu¹, P. P. Balakrishnan², A. J. Grutter², C. Kinane³, A. Caruana³, P. Nakarmi⁴, B. Nepal⁴, D. A. Smith¹, Y. Lim¹, J. L. Jones¹, W. C. Thomas¹, J. Zhao⁵, M. F. Michel⁵, T. Mewes⁴, S. Emori¹

¹Physics, Virginia Tech, Blacksburg, Virginia, United States, ²National Institute of Standards and Technology, Center for Neutron Research, Gaithersburg, Maryland, United States, ³ISIS-Neutron and Muon Source, STFC Rutherford Appleton Laboratory, Didcot, United Kingdom, ⁴Dept. of Physics and Astronomy, University of Alabama, Tuscaloosa, Alabama, United States, ⁵Geoscience, Virginia Tech, Blacksburg, Virginia, United States

02:36 PM-02:48 PM

FD-02. Low Gilbert damping of canonical frustrated Kagome magnet Fe₃Sn₂

Z. Jin^{1,2}, E. Lesne³, K. Nukui^{1,2}, S. Miki², C. Felser³, A. Hirohata^{5,4,3}, S. Mizukami^{2,4}

¹Department of Applied Physics, Graduate School of Engineering, Tohoku Univ., Sendai, Miyagi, Japan, ²WPI-AIMR, Tohoku Univ., Sendai, Miyagi, Japan, ³Max Planck Institute for Chemical Physics of Solids, Dresden, Germany, ⁴CSIS, Tohoku Univ., Sendai, Miyagi, Japan, ⁵RIEC, Tohoku Univ., Sendai, Miyagi, Japan

02:48 PM-03:00 PM

FD-03. Magnetic Losses in Soft Magnetic Composites and Ferrites under Rectangular Asymmetric Excitation

S. Dobák, F. Onderko, J. Fuzer, P. Kollár

Institute of Physics, P. J. Safarik University in Kosice, Kosice, Slovakia

03:00 PM-03:12 PM

FD-04. Modulation of spin dynamics in Fe thin films induced by adjacent Co/Ni multilayers with perpendicular magnetic anisotropy

S. Baek, T. Izumi, S. Komori, T. Taniyama

Nagoya University, Nagoya, Japan

03:12 PM-03:48 PM

FD-05. Gilbert damping in low-dimensional magnetic systems: Quantum oscillations and symmetry constraint

Z. Yuan

Interdisciplinary Center for Theoretical Physics and Information Sciences, Fudan University, Shanghai, China

03:48 PM-04:15 PM

Break

04:15 PM-04:27 PM

FD-06. Quantifying Spin-Mixing in Ferrimagnetic Fe-Gd Alloys via XMCD and FMR Spectroscopy

V. Ganepola Arachchige¹, J. J. Wisser², R. Knut³, D. A. Arena¹

¹*Department of Physics, University of South Florida, Tampa, Florida, United States*, ²*National Institute of Standards and Technology, Boulder, Colorado, United States*, ³*Department of Physics and Astronomy, Uppsala University, Uppsala, Sweden*

04:27 PM-04:39 PM

FD-07. Crystal growth and terahertz time-domain spectroscopy in Sm_{1-x}R_xFeO₃ orthoferrite

A. Wu¹, Z. Zhang¹, Z. Zhang¹, L. Su¹, L. Luo², J. Wang²

¹*State Key Laboratory of Functional Crystals and Devices, Shanghai Institute of Ceramics, Chinese Academy of Sciences, Shanghai, China*, ²*Department of Physics and Astronomy, Iowa State University, Ames, Iowa, United States*

04:39 PM-04:51 PM

FD-08. Micromagnetic Insights into History-Dependent Domain Behavior in MBE-grown 2D Magnet/Topological Insulator Heterostructure Fe₃GeTe₂/Bi₂Te₃

M. Zhao¹, T. Cham^{6,2}, A. Koerner¹, E. Berg¹, D. Bergner¹, W. Zhou³, Z. Li³, L. Powalla⁴, S. Wintz⁵, M. Weigand⁵, D. C. Ralph², R. Kawakami⁵, Y. Luo^{1,7,8}

¹*Department of Physics and Astronomy, University of Southern California, Los Angeles, California, United States*, ²*Laboratory of Atomic and Solid State Physics, Cornell University, Ithaca, New York, United States*, ³*Ohio State University, Columbus, Ohio, United States*, ⁴*Max Planck Institute for Solid State Research, Stuttgart, Germany*, ⁵*Helmholtz-Zentrum Berlin für Materialien und Energie, Dresden, Germany*, ⁶*Division of Physics, Math and Astronomy, California Institute of Technology, Pasadena, California, United States*, ⁷*USC Mork Family Department of Chemical Engineering and Materials Science, University of Southern California, Los Angeles, California, United States*, ⁸*Department of Chemistry, University of Southern California, Los Angeles, California, United States*

04:51 PM-05:03 PM

FD-09. Probing Temperature-dependent Magnetization Dynamics in Co₂MnGa Weyl Semimetal Thin Films

A. I. Ojo¹, V. Ganepola Arachchige¹, D. DeTellem¹, A. Markou^{2,3}, C. Felser³, J. D. Gayles¹, M. Phan¹, D. A. Arena¹

¹*Department of Physics, University of South Florida, Tampa, Florida, United States*, ²*Physics Department, University of Ioannina, Ioannina, Ioannina, Greece*, ³*Max Planck Institute for Chemical Physics of Solids, Dresden, Germany*

SESSION FE: MAGNETISM AND SPINTRONICS: LOW-DIMENSIONAL SYSTEMS

Chair(s): Y. Luo, *Physics and Astronomy, University of Southern California, Los Angeles, California, United States*

Thursday, October 30, 2025

02:00 PM-05:30 PM

Room 2DE

02:00 PM-02:36 PM

FE-01. Spin-filter tunneling detection of antiferromagnetic resonance with electrically-tunable damping

T. Cham^{1,2}, D. G. Chica³, X. Huang¹, K. Watanabe⁴, T. Taniguchi⁵, X. Roy³, Y. Luo^{7,8,9}, D. C. Ralph^{1,6}

¹Laboratory of Atomic and Solid State Physics, Cornell University, Ithaca, New York, United States, ²Division of Physics, Math and Astronomy, Caltech, Pasadena, California, United States, ³Department of Chemistry, Columbia University, New York, New York, United States, ⁴Research Center for Electronic and Optical Materials, National Institute for Materials Science, Tsukuba, Ibaraki, Japan, ⁵Research Center for Materials Nanoarchitectonics, National Institute for Materials Science, Tsukuba, Ibaraki, Japan, ⁶Kavli Institute at Cornell, Ithaca, New York, United States, ⁷Department of Physics and Astronomy, University of Southern California, Los Angeles, California, United States, ⁸Mork Family Department of Chemical Engineering and Materials Science, University of Southern California, Los Angeles, California, United States, ⁹Department of Chemistry, University of Southern California, Los Angeles, California, United States

02:36 PM-02:48 PM

FE-02. Probing Magnetotransport in 2D Heterostructure of a Weyl Semimetal and a Semiconducting Antiferromagnet

R. Posti, R. Bandapelli, I. Kao, Z. Cui, J. Katoch, S. Singh

Department of Physics, Carnegie Mellon University, Pittsburgh, Pennsylvania, United States

02:48 PM-03:00 PM

FE-03. Unusual Hall effect in vdW ferromagnetic Fe₃GeTe₂ nanoflake devices

R. Roy Chowdhury^{1,2}, D. Kurebayashi³, J. Lustikova⁴, O. Tretiakov³, S. Fukami^{5,4}, R. Singh², S. DuttaGupta^{6,4,5}

¹Department of Physics, University of South Florida, Tampa, Florida, United States, ²Department of Physics, Indian Institute of Science Education and Research Bhopal, Bhopal, Madhya Pradesh, India, ³School of Physics, University of New South Wales, Sydney, New South Wales, Australia, ⁴Center for Science and Innovation in Spintronics (CSIS), Tohoku University, Sendai, Miyagi, Japan, ⁵Research Institute of Electrical Communication (RIEC), Tohoku University, Sendai, Miyagi, Japan, ⁶Condensed Matter Physics Division, Saha Institute of Nuclear Physics, Kolkata, West Bengal, India

03:00 PM-03:12 PM

FE-04. Interface Engineering of Exchange Bias in van der Waals Heterostructures

A. Puthirath Balan¹, A. Kumar¹, P. Reiser², J. Vas³, T. Denneulin³, J. Yang⁴, A. Bonanni⁵, B. Lotsch⁶, P. Maletinsky², R. E. Dunin-Borkowski³, M. Kläui^{1,7}

¹Johannes Gutenberg University Mainz, Mainz, Germany, ²University of Basel, Basel, Switzerland, ³Forschungszentrum Jülich, Jülich, Germany, ⁴Peking University, Beijing, China, ⁵Johannes Kepler University Linz, Linz, Austria, ⁶Max Planck Institute for Solid State Research, Stuttgart, Germany, ⁷Norwegian University of Science and Technology, Trondheim, Norway

03:12 PM-03:24 PM

FE-05. Light-induced orbital and spin magnetism in 3d, 4d, and 5d transition metals

T. Adamantopoulos^{1,2,3}, D. Go^{1,2}, Y. Mokrousov^{2,1}

¹Johannes Gutenberg University Mainz, Mainz, Germany, ²Forschungszentrum Jülich, Jülich, Germany, ³RWTH Aachen University, Aachen, Germany

03:24 PM-03:36 PM

FE-06. Tunable Moiré Phases in Magnetic Van der Waals Homobilayers

G. Cheng¹, P. Upadhyaya², Y. P. Chen^{1,2}

¹Tohoku University, Sendai, Japan, ²Purdue University, West Lafayette, Indiana, United States

03:36 PM-03:48 PM

FE-07. Ultrafast carrier dynamics explored in micron-sized van der Waals materials through spatially localized spintronic terahertz emission spectroscopy

P. Agarwal, M. Jiang, L. Ke, J. Lourembam

*Institute of Materials Research and Engineering (IMRE), Agency for Science, Technology and Research (A*STAR), Singapore, Singapore*

03:48 PM-04:15 PM

Break

04:15 PM-04:51 PM

FE-08. Controllable Synthesis and Modulation of Two-dimensional Magnetic Materials

Z. Meng¹, Y. Hou²

¹*Peking University, Beijing, China*, ²*Sun Yat-sen University, Shenzhen, China*

04:51 PM-05:03 PM

FE-09. Twist-angle-programmable magnetism in graphene/CrI₃ heterostructures

F. Sanchez-Ochoa

Instituto de Fisica, Universidad Nacional Autonoma de Mexico, CDMX, Mexico

05:03 PM-05:15 PM

FE-10. Giant Odd-Parity Magnetoresistance in α -Sn/(In,Fe)Sb Heterostructures via Magnetic Proximity-Induced Topological States

L. Anh¹, T. Hotta¹, T. Chiba^{2,3}, Y. Kota⁴, M. Tanaka¹

¹*The University of Tokyo, Tokyo, Japan*, ²*Yamagata University, Yamagata, Japan*, ³*Tohoku University, Sendai, Japan*, ⁴*NIT, Fukushima College, Iwaki, Japan*

SESSION FF: UNCONVENTIONAL COMPUTING

Chair(s): P. Talatchian, *SPINTEC, Grenoble, Isère, France*

Thursday, October 30, 2025

02:00 PM-05:30 PM

Room 2BC

02:00 PM-02:36 PM

FF-01. Towards All-Electric, Non-volatile Intelligence in Physical Neural Systems

J. Zhou

*Institute of Materials Research and Engineering (IMRE), Agency for Science Technology and Research (A*STAR), Singapore, Singapore*

02:36 PM-02:48 PM

FF-02. N-ary In-memory Computing in a Crossbar Array of Multistate Magnetic Tunnel Junctions

A. Moureaux, A. Lopes Temporao, F. Abreu Araujo

Institute of Condensed Matter and Nanosciences, UCLouvain, Louvain-la-Neuve, Walloon Brabant, Belgium

02:48 PM-03:00 PM

FF-03. Skyrmion based Reservoir Computing for Spatiotemporal Motion Recognition

M. Alam¹, M. Rajib¹, S. Sabyasachi¹, M. Stiles², J. Atulasimha^{1,3}

¹Mechanical and Nuclear Engineering, Virginia Commonwealth University, Richmond, Virginia, United States, ²Alternate Computing Group, NIST, Gaithersburg, Maryland, United States, ³Electrical and Computer Engineering, Virginia Commonwealth University, Richmond, Virginia, United States

03:00 PM-03:12 PM

FF-04. Stochastic Multilayer Spintronic Neural Networks Trained using Local-Learning Rules

J. Peters¹, N. Phan^{1,2}, U. Ebels¹, P. Talatchian¹

¹Univ. Grenoble Alpes, CEA, CNRS, Grenoble INP, Spintec, Grenoble, France, ²Laboratoire Albert Fert, CNRS, Thales, Université Paris-Saclay, Paris, France

03:12 PM-03:24 PM

FF-05. A Probabilistic Nanomagnetic Logic Network Enabling Reversible Computing

S. Nallan, J. Zhu

Data Storage Systems Center, Carnegie Mellon University, Pittsburgh, Pennsylvania, United States

03:24 PM-03:36 PM

FF-06. Field-Free Random Number Generation with Elliptical Voltage-Controlled Magnetic Tunnel Junctions for Probabilistic Computing

J. G. Athas, C. Duffee, T. Neuner, P. Khalili Amiri

Electrical and Computer Engineering, Northwestern University, Chicago, Illinois, United States

03:36 PM-03:48 PM

FF-07. Exploiting Probabilistic Switching of Magnetic Tunnel Junctions (MTJs) for Near-Memory and In-Memory Computing

S. S. Mugdho, E. Rogers, K. Gupte, C. Wang

Electrical and Computer Engineering, Iowa State University, Ames, Iowa, United States

03:48 PM-04:15 PM

Break

04:15 PM-04:51 PM

FF-08. Wafer-Scale SOT-MRAM for Energy- and Memory-Efficient Analog Computing

S. Liu¹, M. Song², J. C. Incorvia¹

¹The University of Texas at Austin, Austin, Texas, United States, ²Taiwan Semiconductor Manufacturing Corporation, Hsinchu, Taiwan

04:51 PM-05:03 PM

FF-09. Non-reciprocal phase transitions in kagome artificial spin ice plasmonic metasurfaces

S. Gupta¹, L. Martinez², L. McClintok², Z. Jacob¹, P. Padmanabhan², P. Iyer³

¹Purdue University, West Lafayette, Indiana, United States, ²Los Alamos National Laboratory, Los Alamos, New Mexico, United States,

³Sandia National Laboratory, Albuquerque, New Mexico, United States

05:03 PM-05:15 PM

FF-10. Integrated Magnonic Reservoir Computing with Magnetic Metamaterials

C. Swindells¹, I. T. Vidamour^{2,1}, G. Venkat¹, T. Hayward¹

¹Department of Materials Science and Engineering, University of Sheffield, Sheffield, United Kingdom, ²Department of Computer Science, University of Sheffield, Sheffield, United Kingdom

SESSION FG: THIN FILM AND INTERFACES

Chair(s): P. Tiberto, *INRIM, Torino, Italy*

Thursday, October 30, 2025

02:00 PM-05:30 PM

Room 2A

02:00 PM-02:12 PM

FG-01. Design and Optimization of Thin-film Ferromagnetic Patterns for Ultra-Compact High Frequency Bandstop Filters

H. Yin, A. El-Ghazaly

Electrical and Computer Engineering, Cornell University, Ithaca, New York, United States

02:12 PM-02:24 PM

FG-02. Interface-Induced Magnetism in Hybrid Heterostructures Containing Monolayer Transition Metal Dichalcogenide Coated with V₂O₅ Thin Films

Y. Wadumesthri¹, N. Kapuruge¹, R. B. de Oliveira², B. Ipaves², G. S. Fabris², R. Tromer³, K. Lasek¹, N. Schulz¹, H. Srikanth¹, M. Phan¹, D. S. Galvão², H. Rodríguez Gutiérrez¹

¹*Department of Physics, University of South Florida, Tampa, Florida, United States*, ²*Applied Physics Department and Center for Computational Engineering & Sciences, State University of Campinas, Campinas, São Paulo, Brazil*, ³*Institute of Physics, University of Brasília, Brasília, DF, Brazil*

02:24 PM-02:36 PM

FG-03. Mechanistic Insights into Anisotropy and Magnetoresistance Control in Cobalt Ferrite Thin Films by Swift Heavy Ion Irradiation

R. Charak¹, S. Gautam^{2,3}, S. Garg², R. Meena⁴, Y. Kim⁶, K. Chae⁵

¹*Energy Research Center, Panjab University, Chandigarh, India*, ²*Department of Physics, Panjab University, Chandigarh, India*, ³*Advanced Functional Materials Lab Pvt. Ltd, Panjab University, Chandigarh, India*, ⁴*Materials Science Centre, Inter University Accelerator Centre, New Delhi, India*, ⁵*Advanced Analysis & Data Center, Korea Institute of Science and Technology, Seoul, Korea (the Republic of)*, ⁶*Pohang Accelerator Lab, Pohang University of Science & Technology, Pohang, Korea (the Republic of)*

02:36 PM-02:48 PM

FG-05. Post-Oxidation Strategy for Reducing Antiphase Boundaries in Spinel Ferrites

H. Yanagihara, K. Takeo, E. Kita

University of Tsukuba, Tsukuba, Japan

02:48 PM-03:00 PM

FG-07. On the nature of spin reorientation transition thermal hysteresis in AFM/FM bilayers: experiment and phenomenology

M. Slezak¹, E. Swierkosz¹, A. Kwiatkowski¹, M. Szpytma¹, W. Janus¹, M. Zajac², P. Drozd¹, E. Oles¹, A. Koziol Rachwal¹, T. Slezak¹

¹*AGH University of Krakow, Krakow, Poland*, ²*National Synchrotron Radiation Centre SOLARIS, Jagiellonian University, Krakow, Poland*

03:00 PM-03:12 PM

FG-08. Plasma-Treated Perpendicular Magnetic Anisotropy in Sub-Nanometer W/CoFeB/MgO for BEOL Integration

G. Hong¹, J. Park¹, J. Pyo¹, J. Yoo¹, S. Lee¹, B. Kang¹, J. An¹, B. Ham¹, J. Choi¹, J. Lee², J. Kwon², S. Ahn¹, R. Baek¹

¹*Department of Electrical Engineering, POSTECH, Pohang, Gyeongbuk, Korea (the Republic of)*, ²*AVP Division, Hyundai Motor Company, Hwaseong, Gyeonggi, Korea (the Republic of)*

03:12 PM-03:24 PM

FG-09. Growth and Characterization of β -Mn Structured CoZn Thin Films

M. Dearg^{1,2}, S. Langridge³, G. Burnell¹, C. Marrows¹

¹University of Leeds, Leeds, United Kingdom, ²University of York, York, United Kingdom, ³STFC Rutherford Appleton Laboratory, Didcot, Oxon., United Kingdom

03:24 PM-03:36 PM

FG-10. Utilizing a synthetic exchange bias effect to measure ferromagnetic interlayer interactions

J. Hatala, E. Stimpson, J. Sklenar

Physics, Wayne State University, Detroit, Michigan, United States

FG-11. Low-temperature T-ALD HfO₂ for magneto-ionic applications

A. Cataldo^{1,2}, D. Gouéré³, E. Montebianco³, D. Ravelosona³, A. Li Bassi⁴, A. Lamperti¹

¹CNR-IMM, Agrate Brianza, Italy, ²Department of Chemistry, Materials and Nanotechnology, Politecnico di Milano, Milan, Italy, ³Spin-
lon Technologies, Palaiseau, France, ⁴Department of Energy, Politecnico di Milano, Milan, Italy

03:36 PM-03:48 PM

03:48 PM-04:00 PM

FG-13. Engineering strong perpendicular magnetic anisotropy in Cu-buffered Co/Pt multilayers grown by moderate vacuum e-beam deposition

J. Porro^{1,2}, D. Doménech¹, A. Villar¹, C. Redondo³, N. Río-López^{1,3}, R. Morales^{3,1,2}

¹BCMaterials, Bilbao, Spain, ²Ikerbasque, Bilbao, Spain, ³Physical Chemistry, University of the Basque Country, UPV/EHU, Leioa, Spain

SESSION FP: SHIELDING AND LEVITATION / STRUCTURED MATERIALS, NANOPARTICLES, AND NANOCOMPOSITES (POSTER SESSION)

Chair(s): S. Ahn, POSTECH, Pohang, Korea (the Republic of)

Thursday, October 30, 2025

02:30 PM-05:30 PM

Exhibit Hall Posters

FP-01. Experimental Evaluation of an Active Magnetic Shielding System with a Moving Phantom

X. Cao, T. Zhu, S. Chikaki, M. Sekino

Graduate School of Engineering, The University of Tokyo, Tokyo, Japan

FP-02. Penetration of Magnetic Field by Long Cables into a Slot on Conducting Plate and Rectangular Enclosure

J. Kwon¹, H. Park²

¹Electronics and Telecommunications Research Institute, Daejeon, Korea (the Republic of), ²The University of Suwon, Hwaseong, Korea (the Republic of)

FP-03. Advancing PM Motor Sustainability Through Rapid Computational Evaluation of Alternative Magnet Materials

A. Baghel, I. Nlebedim

Division of Critical Materials, Ames National Laboratory, Ames, Iowa, United States

FP-04. A Link Type Haptic Motor with a Pure Magnetic Spring for Enhanced Lifespan and Performance

Y. Oh¹, K. Park¹, D. Xu², S. Hwang¹

¹*School of Mechanical Engineering, Pusan National University, Busan, Korea (the Republic of)*, ²*School of Mechatronic Engineering and Automation, Shanghai University, Shanghai, China*

FP-05. A Railgun Concept for Space Launches and Return Travel from the Moon

M. Trapanese

Dipartimento di Ingegneria, Palermo University, Palermo, Italy

FP-06. Asymmetric Magnetization Switching Behavior in FeRh/NiFe Bilayers with Interplay of Competing Exchange Interactions

J. Ahn, M. Jung

Department of Physics, Sogang University, Seoul, Korea (the Republic of)

FP-07. Time-resolved and 3-dimensional vector imaging of magnetic materials with coherent soft x-rays

D. M. Burn, L. Turnbull, A. Walters, S. S. Dhese

Diamond Light Source, Didcot, Oxfordshire, United Kingdom

FP-08. Effect of GO incorporation on microwave characteristics of Zn-Co ferrites nanocomposites

M. Dabla¹, S. Kaushik¹, P. Kumar¹, M. Sharma^{1,2}, B. K. Kuanr¹

¹*Special Centre for Nanoscience, Jawaharlal Nehru University, New Delhi, Delhi, India*, ²*Department of Physics, Deshbandhu College, University of Delhi, New Delhi, Delhi, India*

FP-09. Engineering Next-Generation Magnetic Coupling in Magnetite Core-Shell Nanostructures: The Influence of Advanced Preparation Methods

J. G. Lambe^{3,1}, M. Gamal^{1,2}, C. Castaño¹

¹*Mechanical and Nuclear Engineering Department, Virginia Commonwealth University, Richmond, Virginia, United States*, ²*Polymers and Pigments Department, National Research Centre, Cairo, Dokki, Egypt*, ³*Mechanical Engineering and Physics, Rose-Hulman Institute of Technology, Terre Haute, Indiana, United States*

FP-10. Fabrication of Fe-B/Epoxy Composite Film via LbL-Assisted Composite Plating Using Silica-Coated Fe-B Particles

T. Nishii¹, I. Tanigawa³, W. K. Tan⁴, H. Muto⁴, Y. Endo¹, M. Izaki², N. Fujita²

¹*Tohoku University, Sendai, Miyagi, Japan*, ²*National Institute of Technology, Nara College, Yamatokoriyama, Nara, Japan*, ³*Okuno Chemical Industries co., ltd., Osaka, Osaka, Japan*, ⁴*Toyohashi University of Technology, Toyohashi, Aichi, Japan*

SESSION FQ: ANTIFERROMAGNETS, FERRIMAGNETS & ULTRAFAST SPIN DYNAMICS (POSTER SESSION)

Chair(s): S. Majumder, *Department of Physics, University of South Florida, Tampa, Florida, United States*

Thursday, October 30, 2025

02:30 PM-05:30 PM

Exhibit Hall Posters

FQ-01. Observation of magnon polarons in non-local spin transport in an antiferromagnetic crystal Cr_2O_3

Q. Gao^{1,2}, J. Li^{1,2}

¹*Department of Physics, Southern University of Science and Technology, Shenzhen, Guangdong, China*, ²*Quantum Science Center of Guangdong-Hong Kong-Macao Greater Bay Area (Guangdong), Shenzhen, Guangdong, China*

FQ-02. Enhancing the Magneto-Optical Kerr Effect in Non-collinear Antiferromagnets via a Dielectric Layer

E. Gong^{2,1}, M. Yoo^{2,1}, A. Hoffmann^{2,1}

¹*Department of Materials Science and Engineering, The Grainger College of Engineering, University of Illinois Urbana-Champaign, Urbana, Illinois, United States*, ²*Materials Research Laboratory, University of Illinois Urbana-Champaign, Urbana, Illinois, United States*

FQ-04-LB. Reduction of materials criticality in hybrid manufacturing of Halbach arrays using sintered NdFeB magnets and additively manufactured soft magnet frames

L. Cosgrove¹, T. Lamichhane¹, M. P. Paranthaman², N. Poudel³, T. Charlton²

¹*Engineering, University of Central Oklahoma, Edmond, Oklahoma, United States*, ²*Oakridge National Lab, Oak Ridge, Tennessee, United States*, ³*Veryst Engineering, Needham, Massachusetts, United States*

FQ-07. Antiferromagnetic-Ferromagnetic Phase Transition in Epitaxial and Non-oriented FeRh Thin Films

F. Efe¹, F. Bakhshizadeh¹, D. Alharbi^{1,2}, M. Guy¹, M. Davis¹, A. Lisfi¹

¹*Physics, Morgan State University, Baltimore, Maryland, United States*, ²*Physics, The Catholic University of America, Washington DC, District of Columbia, United States*

FQ-08. Defect-Mediated Ferromagnetism in Transition Metal-Doped ZnO Thin Films

A. Alsmadi, B. Salameh

Physics, Kuwait University, Kuwait, Kuwait

FQ-09. Deterministic modelling of ultrafast dynamics in magnetic tunnel junctions

P. Thibaudeau¹, M. Fattouhi², L. D. Buda-Prejbeanu²

¹*CEA, DAM, Le Ripault, Monts, France*, ²*SPINtronique et Technologie des Composants, Grenoble, France*

FQ-10. Terahertz emission from CoFeB/Pt_{1-x}Cu_x spintronic bilayers

C. Bull^{1,2}, R. Ji^{1,2}, C. Lin^{1,2}, T. Gething^{2,1}, S. M. Hewett^{1,2}, B. Spencer³, H. J. Waring¹, T. Thomson¹, D. M. Graham^{2,4}, P. Nutter¹

¹*Dept. of Computer Science, University of Manchester, Manchester, United Kingdom*, ²*Dept. of Physics and Astronomy, University of Manchester, Manchester, United Kingdom*, ³*Department of Materials, University of Manchester, Manchester, United Kingdom*, ⁴*The Cockcroft Institute, Daresbury, United Kingdom*

SESSION FR: SKYRMIONS AND SPIN-ORBIT TORQUE (POSTER SESSION)

Chair(s): B. Sanyal, *Department of Physics & Astronomy, Uppsala University, Uppsala, Sweden*

Thursday, October 30, 2025

02:30 PM-05:30 PM

Exhibit Hall Posters

FR-01. Spin accumulation-induced magneto-photogalvanic effect in metals

A. Kamiryo¹, M. Yamamoto², T. Nishijima², R. Ohshima², M. Shiraishi², Y. Ando¹

¹Osaka Metropolitan Univ., Sakai, Osaka, Japan, ²Kyoto Univ., Kyoto, Kyoto, Japan

FR-03. Effects of In-Plane Magnetic Fields and Energy Analysis during the Control of Antiskyrmion Formation

Y. Machida, M. Taniwaki, A. L. Foggatto, M. Kotsugi

Materials Science and Technology, Tokyo University of Science, Tokyo, Japan

FR-04. Antisymmetric Planar Hall-Induced Artifacts in Second Harmonic Hall SOT Measurements: A Case Study in RuO₂(101)

Q. Jia, S. Nair, Y. Yang, S. G. Jeong, S. Lee, D. Tonini, S. Liang, Y. Chen, O. Benally, B. Dixit, T. Low, B. Jalan, J. Wang

University of Minnesota, Minneapolis, Minnesota, United States

FR-05. Metallic 2D-MXene: a promising underlayer of SOT device for field-free switching and enhancement of efficiency

P. Kumar¹, H. Abe², Y. Kotani³, A. Sumiyoshiya³, T. Nakamura^{4,3}, G. K. Shukla¹, S. Isogami¹

¹NIMS, Tsukuba, Japan, ²KEK, Tsukuba, Japan, ³PhoSIC, Sendai, Japan, ⁴Tohoku University, Sendai, Japan

FR-06. Nonlinear dynamics excited for room-temperature skyrmions by current injection

S. Yadav¹, S. Chatterjee¹, S. Sugimoto², S. Kasai²

¹Physics, IIT Varanasi, Varanasi, India, ²NIMS, Tsukuba, Japan

FR-07. Skyrmion-like magnetic domain structures in epitaxial [Ru/Co/Pt]_n synthetic antiferromagnets

Y. Hisada, S. Komori, T. Taniyama

Dept. Phys., Nagoya Univ., Nagoya, Japan

FR-08. Current-driven dynamics of an isolated skyrmion in a racetrack with materialistic defects: Influence of defect size and density

P. Kamal, R. Posti, A. Tripathi

Physics, Indian Institute of Technology, Ropar, Department of Physics, Rupnagar, Ropar, Punjab, India

FR-09. Comparing spin Hall angle in (Bi_{1-x}Sb_x)₂Te_{3-y}Se_y (x = 0.58, y=1) using spin-torque ferromagnetic resonance and non-local voltage measurements

V. Sharma^{1,2}, S. Jois², G. M. Stephen², T. Hossain³, B. Jungfleisch³, P. J. Taylor⁴, A. T. Hanbicki², A. Friedman²

¹Department of Electrical and Computer Engineering, University of Maryland College Park, College Park, Maryland, United States,

²Laboratory for Physical Sciences, College Park, Maryland, United States, ³Department of Physics and Astronomy, University of Delaware, Newark, Delaware, United States, ⁴Army Research Laboratory, Adelphi, Maryland, United States

FR-10. Static and Dynamic Magnetic Properties of Ultrathin Co Films on MoSe₂/Sapphire Heterostructures for Opto-Spintronic Applications

I. A. Almuhanha, Y. Wadumesthri, A. I. Ojo, H. Rodríguez Gutiérrez, D. A. Arena

University of South Florida, Tampa, Florida, United States

FR-13. Ultrafast stochastic thermal switching of dipolar skyrmion cores in Fe₃Sn₂ nanodisks with perpendicular magnetic anisotropy

C. M. Nezat, [M. Charilaou](#)

Department of Physics, University of Louisiana at Lafayette, Lafayette, Louisiana, United States

BIERSTUBE

Thursday, October 30, 2025

05:00 PM-06:30 PM

Exhibit Hall Events

FROM THE LAB TO A STARTUP

Chair(s): C. Rinaldi, *Physics, Politecnico di Milano, Milano, Italy*

Thursday, October 30, 2025

06:30 PM-08:00 PM

Grand Ballroom

SESSION GA: UNCONVENTIONAL AND NONRECIPROCAL SUPERCONDUCTIVITY

Chair(s): D. Makarov, *Helmholtz-Zentrum Dresden-Rossendorf, Dresden, Germany*

Friday, October 31, 2025

08:30 AM-12:00 PM

Grand Ballroom

08:30 AM-09:06 AM

GA-01. Superconducting Spintronics

[S. Parkin](#)

NISE, Max Planck Institute for Microstructure Physics, Halle (Saale), Germany

09:06 AM-09:42 AM

GA-02. Superconducting diode effect in metallic multilayers

[T. Ono](#)

Kyoto University, Uji, Japan

09:42 AM-10:18 AM

GA-03. Superconductor-Ferromagnet Proximity Coupled Bilayers Leads to Majorana Bound States and Nonreciprocal Critical Current Flow

[J. S. Moodera](#)

Physics, Plasma Science and Fusion Center, MIT, Cambridge, Massachusetts, United States

10:18 AM-10:45 AM

Break

10:45 AM-11:21 AM

GA-05. Magnetic Imaging of Chiral and Magnetic Superconductors

[Y. Iguchi^{1,2}](#)

¹*Geballe Laboratory for Advanced Materials, Stanford University, Stanford, California, United States*, ²*Stanford Institute for Materials and Energy Sciences, SLAC National Accelerator Laboratory, Menlo Park, California, United States*

11:21 AM-11:57 AM

Panel Discussion

SESSION GB: PROBING AND MANIPULATING MAGNETIC ORDER IN 2D SYSTEMS

Chair(s): S. Singh, *Physics, Carnegie Mellon University, Pittsburgh, Pennsylvania, United States*

Friday, October 31, 2025

08:30 AM-12:00 PM

Ballroom A

08:30 AM-09:06 AM

GB-01. Spin-orbit torque in van der Waals magnetic heterostructures: from microscopic domain imaging to ultrasensitive Sagnac Kerr interferometry

Y. Luo^{1, 2, 3}

¹*Department of Physics and Astronomy, University of Southern California, Los Angeles, California, United States*, ²*Mork Family Department of Chemical Engineering and Materials Science, University of Southern California, Los Angeles, California, United States*,

³*Department of Chemistry, University of Southern California, Los Angeles, California, United States*

09:06 AM-09:42 AM

GB-02. Quantum Sensing Using Two-dimensional Hexagonal Boron Nitride

H. Wang, J. Zhou

School of Physics, Georgia Institute of Technology, Atlanta, Georgia, United States

09:42 AM-10:18 AM

GB-03. Electrostatic and Optical Control over the Magneto-Optics and the Magnetization Dynamics of van der Waals Magnets

M. H. Guimaraes

University of Groningen, Groningen, Netherlands

10:18 AM-10:54 AM

GB-04. Magnetism and spin transport in van der Waals heterostructures with 2D magnets

B. Sanyal, S. Ershadrad, M. Davoudiniya

Uppsala University, Uppsala, Sweden

SESSION GC: QUANTUM MATERIALS AND COOPERATIVE STATES

Chair(s): J. F. Sierra, *Catalan Institute of Nanoscience and Nanotechnology (ICN2), Bellaterra, Barcelona, Spain*

Friday, October 31, 2025

08:30 AM-12:00 PM

Ballroom C

08:30 AM-09:06 AM

GC-01. Diverse Electronic Landscape of Kagome Motif

M. Neupane

Department of Physics, University of Central Florida, Orlando, Florida, United States

09:06 AM-09:18 AM

GC-04. Molecular Beam Epitaxy Growth of Euln₂As₂ Thin Films on Sapphire and YAG

M. Abdul Karim, X. Liu, B. A. Assaf

Physics, University of Notre Dame, Notre Dame, Indiana, United States

09:18 AM-09:30 AM

GC-05. Fractional Quantum Anomalous Hall Effect and Chiral Superconductivity in Graphene

L. Ju¹, Z. Lu²

¹*Physics, Massachusetts Institute of Technology, Cambridge, Massachusetts, United States*, ²*Department of Physics, Florida State University, Tallahassee, Florida, United States*

09:30 AM-10:06 AM

GC-07. Fate of entanglement in quantum spin liquid under Lindbladian or non-Markovian dynamics induced by sudden coupling to dissipative bosonic environment

F. E. García Gaitan, B. Nikolić

Department of Physics, University of Delaware, Newark, Delaware, United States

10:06 AM-10:18 AM

GC-08. Structural design and multiple magnetic orderings of the intergrowth compound $\text{Eu}_2\text{CuMn}_2\text{P}_3$

X. Chen¹, Z. Wang¹, W. Yang², J. Lu³, Z. Zhou¹, Z. Ren², G. Cao³, S. Dong¹, Z. Wang¹

¹*Southeast University, Nanjing, China*, ²*Westlake University, Hangzhou, China*, ³*Zhejiang University, Hangzhou, China*

10:18 AM-10:30 AM

GC-09. Evidence for electron fractionalization in a kagome metal

G. Aeppli^{1,2,3}, S. Ekahana³, Y. Soh³, Z. Wenliang³, T. Schmitt³

¹*ETH, Zurich, Switzerland*, ²*EPFL, Lausanne, Switzerland*, ³*PSI, Villigen, Switzerland*

SESSION GD: MAGNETOELECTRIC AND MULTIFERROICS III

Chair(s): S. Husain, *Material Science and Engineering, University of California, Berkeley, Berkeley, California, United States*

Friday, October 31, 2025

08:30 AM-12:00 PM

Ballroom B

08:30 AM-09:06 AM

GD-01. Magnetoelectric Coupling Reprogrammed Magnonic Logic in Multiferroic Heterostructure

P. Che¹, A. Abdelsamie¹, Á. Papp², S. Salama³, A. Thiaville⁴, R. Lebrun¹, S. Fusil¹, V. Garcia¹, A. Vecchiola¹, K. Bouzehouane¹, M. Bibes¹, A. Barthelemy¹, J. Adam³, V. E. Demidov⁵, P. Bortolotti¹, A. Anane¹, I. Boventer¹

¹*Laboratoire Albert Fert, CNRS, Thales, Université Paris-Saclay, Palaiseau, Île-de-France, France*, ²*Faculty of Information Technology and Bionics, Pazmany Peter Catholic University, Budapest, Hungary*, ³*Centre de Nanosciences et de Nanotechnologies, CNRS, Université Paris-Saclay, Palaiseau, Île-de-France, France*, ⁴*Laboratoire de Physique des Solides, Université Paris-Saclay, CNRS, Orsay, Île-de-France, France*, ⁵*Institute of Applied Physics, University of Muenster, Muenster, Germany*

09:06 AM-09:42 AM

GD-02. Ferroelectric-Control of Magnetotransport in Ruddlesden-Popper Strontium Iridates

X. Hong

Department of Physics and Astronomy, University of Nebraska-Lincoln, Lincoln, Nebraska, United States

09:42 AM-09:54 AM

GD-03. Stress-Coupled Nonlinear Magneto-Thermo-Mechanical Behaviour of Magnetostrictive and Magnetoelectric Composites under Combined Loads

S. Somavarapu¹, P. Kondaiah¹, K. Deepak²

¹*Department of Aerospace and Mechanical Engineering, Mahindra University, Hyderabad, Telangana, India*, ²*Department of Metallurgical Engineering, Indian Institute of Technology (BHU) Varanasi, Varanasi, Uttar Pradesh, India*

09:54 AM-10:06 AM

GD-04. Withdrawn

10:06 AM-10:18 AM

GD-05. Swift Heavy Ion-Induced Modifications in the Magnetic and Electronic Properties of $\text{LaMn}_{0.8}\text{Co}_{0.2}\text{O}_3$ Thin Film

F. H. Bhat¹, A. Jan¹, G. Anjum²

¹Department of Physics, Islamic University of Science and Technology, Kashmir, Pulwama, India, ²Department of Physics, Govt. SAM Degree College Budgam, Budgam, India

10:18 AM-10:45 AM

Break

10:45 AM-10:57 AM

GD-06. Boosting Magneto-Ionic Effects in $\text{CoFeB}/\text{MgO}/\text{HfO}_2/\text{LiPON}$ Stacks by Ion Irradiation

Y. Sassi¹, R. Mansell², D. Gouéré¹, E. Monteblanco¹, S. van Dijken², D. Ravelosona¹

¹Spin-Ion Technologies, Centre de Nanosciences et Nanotechnologies, Palaiseau, France, ²NanoSpin, Department of Applied Physics, Aalto University School of Science, FI-00076 Aalto, Finland

10:57 AM-11:09 AM

GD-07. Precession-Field-Free Voltage Controlled Magnetic Anisotropy Switching of Magnetic Tunnel Junction

D. Favaro^{2,1}, D. Narducci², J. Chatterjee², M. Gama Monteiro², S. Rao², R. Carpenter², J. Van Houdt^{2,1}, K. Temst^{1,2}, W. Kim²

¹Physics and Astronomy, KU Leuven, Leuven, Belgium, ²Imec, Leuven, Belgium

11:09 AM-11:21 AM

GD-08. Large Room-Temperature Anomalous Nernst Effect in a Magnetic Equiatomic Heusler Alloy for Spin-Caloritronic Applications

R. Roy Chowdhury¹, P. Sharma¹, A. Bera², J. Nag^{2,3}, A. Alam², K. G. Suresh², M. Phan¹, H. Srikanth¹

¹Department of Physics, University of South Florida, Tampa, Florida, United States, ²Department of Physics, Indian Institute of Technology Bombay, Mumbai, Maharashtra, India, ³Pennsylvania State University, University Park, Pennsylvania, United States

SESSION GE: MAGNONICS III: MATERIALS & SPIN TEXTURE DYNAMICS

Chair(s): B. Jungfleisch, *University of Delaware, Newark, Delaware, United States*

Friday, October 31, 2025

08:30 AM-12:00 PM

Room 2DE

08:30 AM-08:42 AM

GE-01. Magnetic Properties of CoFeB Films in the Ultrathin Limit

W. K. Peria¹, J. J. Wisser¹, C. Swindells^{2,4}, M. Tanksalvala¹, M. Kiechle², G. Hu³, M. Pufall¹, H. T. Nembach¹

¹*Applied Physics Division, National Institute of Standards and Technology, Boulder, Colorado, United States*, ²*Associate, Physical Measurement Laboratory, National Institute of Standards and Technology, Boulder, Colorado, United States*, ³*IBM T. J. Watson Research Center, Yorktown Heights, New York, United States*, ⁴*Department of Electrical Engineering, University of Colorado Denver, Denver, Colorado, United States*

08:42 AM-08:54 AM

GE-02. Emulating 2D Materials with Magnonic Crystals

B. Kaman, J. Lim, A. Hoffmann

Materials Research Laboratory and Department of Materials Science and Engineering, The Grainger College of Engineering, University of Illinois Urbana-Champaign, Urbana, Illinois, United States

08:54 AM-09:06 AM

GE-03. Magnon-Magnon Coupling in a Pinned Synthetic Antiferromagnet

D. Backes

Diamond Light Source, Didcot, United Kingdom

09:06 AM-09:18 AM

GE-04. Experimental study of magnon-magnon interaction in bilayer, tetralayer, hexlayer, octlayer, and decalayer synthetic antiferromagnets (SAFs)

M. M. Subedi¹, K. Deng², Y. Xiong^{3,4,5}, J. Mongeon², T. Hossain⁶, P. Meisenheimer⁷, E. T. Zhou¹, J. Heron⁷, B. Jungfleisch⁶, W. Zhang^{3,4}, B. Flebus³, J. Sklenar¹

¹*Physics and Astronomy, Wayne State University, Detroit, Michigan, United States*, ²*Department of Physics, Boston College, Chestnut Hill, Massachusetts, United States*, ³*Department of Physics and Astronomy, University of North Carolina, Chapel Hill, North Carolina, United States*, ⁴*Department of Physics, Oakland University, Rochester, Michigan, United States*, ⁵*Department of Electronic and Computer Engineering, Oakland University, Rochester, Michigan, United States*, ⁶*Department of Physics and Astronomy, University of Delaware, Newark, Delaware, United States*, ⁷*Department of Materials Science and Engineering, University of Michigan, Ann Arbor, Michigan, United States*

09:18 AM-09:30 AM

GE-05. Soliton Formation and Topological Transitions during Stripe Collapse in Fe/Gd Multilayers

J. A. Reddinger¹, E. Fullerton², S. Montoya², B. McMorrin¹

¹*Department of Physics, University of Oregon, Eugene, Oregon, United States*, ²*Center for Memory and Recording Research, University of California San Diego, San Diego, California, United States*

09:30 AM-09:42 AM

GE-06. Skyrmion Dynamics Probed with Neutron and X-ray Scattering and in situ Excitations

N. Tang¹, N. Liyanage¹, C. C. Buchanan¹, S. A. Morley², S. Roy², E. Fullerton³, S. Montoya³, L. DeBeer-Schmitt⁴, D. A. Gilbert¹

¹*University of Tennessee, Knoxville, Tennessee, United States*, ²*Lawrence Berkeley National Laboratory, Berkeley, California, United States*, ³*University of California, San Diego, San Diego, California, United States*, ⁴*Oak Ridge National Laboratory, Oak Ridge, Tennessee, United States*

09:42 AM-09:54 AM

GE-08. Coherent phonon excitation by phonon-magnon coupling in stripe domains

N. Arora¹, D. Prestwood^{1,2,3}, T. Kikkawa⁴, E. Saitoh^{4,5,6}, W. R. Branford^{3,7}, J. Gartside^{3,7}, H. Kurebayashi^{1,2,8}

¹London Centre for Nanotechnology, University College London, London, United Kingdom, ²Department of Electronic and Electrical Engineering, University College London, London, United Kingdom, ³Blackett Laboratory, Imperial College London, London, United Kingdom, ⁴Advanced Science Research Center, Japan Atomic Energy Agency, London, United Kingdom, ⁵Institute for AI and Beyond, The University of Tokyo, Tokyo, Japan, ⁶Department of Physics and Astronomy & Nebraska Center for Materials and Nanoscience, University of Nebraska, Lincoln, Nebraska, United States, ⁷London Centre for Nanotechnology, Imperial College London, London, United Kingdom, ⁸WPI-Advanced Institute for Material Research, Tohoku University, Sendai, Japan

09:54 AM-10:06 AM

GE-09. Spin-torque skyrmion resonance in a frustrated Fe₃Sn₂ kagome magnet

N. Bernstein¹, B. J. Assouline¹, H. Li², Y. Lau², I. Rozhansky³, A. Capua¹

¹Applied Physics, The Hebrew University of Jerusalem, Jerusalem, Israel, ²Physics, Beijing National Laboratory for Condensed Matter Physics, Beijing, China, ³National Graphene Institute, University of Manchester, Manchester, United Kingdom

10:06 AM-10:18 AM

GE-10. All-optical stochastic switching of magnetization textures in Fe₃Sn₂

A. Kovács¹, J. T. Weber², M. Charilaou³, D. Kong¹, N. Kiselev⁴, I. Kezsmarki⁵, R. E. Dunin-Borkowski¹, A. Tavabi¹, S. Schäfer²

¹Ernst Ruska Centre, Forschungszentrum Juelich, Juelich, Germany, ²Department of Physics, University of Regensburg, Regensburg, Germany, ³Department of Physics, University of Louisiana at Lafayette, Lafayette, Louisiana, United States, ⁴Peter Gruenberg Institute, Forschungszentrum Juelich, Juelich, Germany, ⁵Experimental Physics V, University of Augsburg, Augsburg, Germany

10:18 AM-10:54 AM

GE-11. Non-Abelian Gauge Theory for Magnons in Topologically Textured Frustrated Magnets

R. Zarzuela¹, S. Kim²

¹Institut für Physik, Johannes Gutenberg Universität Mainz, Mainz, Germany, ²Department of Physics, Korean Advanced Institute of Science and Technology, Daejeon, Korea (the Republic of)

SESSION GF: ALTER- / ANTI-FERROMAGNETISM IN RuO₂ AND OTHER MATERIALS

Chair(s): O. Amin, University of Nottingham, Nottingham, United Kingdom

Friday, October 31, 2025

08:30 AM-12:00 PM

Room 2BC

08:30 AM-09:06 AM

GF-01. Revisiting Spin Transport in RuO₂: Distinguishing Anisotropic Spin Hall from Altermagnetic Spin Splitting Effects

D. Ou¹, Y. Wang², C. Liao², Z. Shen², C. Lin², W. Hsu², Y. Chen¹, Y. Tien², Y. Chin³, A. Singh⁴, W. Lee⁴, S. Huang²

¹Center for Condensed Matter Sciences, National Taiwan University, Taipei, Taiwan, ²Department of Physics, National Taiwan University, Taipei, Taiwan, ³Department of Physics, National Chung Cheng University, Chia-Yi, Taiwan, ⁴Institute of Physics, Academia Sinica, Taipei, Taiwan

09:06 AM-09:18 AM

GF-02. Negative and Large Spin Hall Angle in RuO₂

Y. Wang^{1,2}, Z. Shen¹, C. Lin¹, W. Hsu¹, Y. Chen², Y. Chin³, A. Singh⁴, W. Lee⁴, S. Huang^{1,5}, D. Qu^{2,5}

¹Department of Physics, National Taiwan University, Taipei, Taiwan, ²Center for Condensed Matter Sciences, National Taiwan University, Taipei, Taiwan, ³Department of Physics, National Chung Cheng University, Chia-Yi, Taiwan, ⁴Institute of Physics, Academia Sinica, Taipei, Taiwan, ⁵Center of Atomic Initiatives for New Materials, National Taiwan University, Taipei, Taiwan

09:18 AM-09:30 AM

GF-03. Enhanced Transport of Altermagnet Grain Boundaries Between Crystallographic Domains of Opposite Handedness

S. Tkacik, G. M. Pantano, E. Thareja, J. D. Gayles

University of South Florida, Tampa, Florida, United States

09:30 AM-09:42 AM

GF-04. Spin-to-charge current conversion in altermagnet candidate RuO₂ probed by terahertz emission spectroscopy

J. Jechumtal¹, O. Gueckstock², K. Jasenský¹, Z. Kašpar^{1,3}, K. Olejník³, M. Gaerner⁴, G. Reiss⁴, S. Moser⁵, P. Kessler⁵, G. De Luca⁶, S. Ganguly⁷, J. Santiso⁷, D. Scheffler³, J. Zázvorka¹, P. Kubascik¹, H. Reichlova³, E. Schmoranzero¹, P. Nemeč¹, T. Jungwirth³, P. Kuzel³, T. Kampfrath², L. Nadvornik¹

¹*Faculty of Mathematics and Physics, Charles University, Prague, Czechia*, ²*Department of Physics, Freie Universität Berlin, Berlin, Germany*, ³*Institute of Physics, Czech Academy of Science, Prague, Czechia*, ⁴*Faculty of Physics, Bielefeld University, Bielefeld, Germany*, ⁵*Physikalisches Institut and Würzburg-Dresden Cluster of Excellence ct.qmat, Universität Würzburg, Würzburg, Germany*, ⁶*Materials Science Institute of Barcelona (ICMAB-CSIC), Barcelona, Spain*, ⁷*Catalan Institute of Nanoscience and Nanotechnology, Barcelona, Spain*

09:42 AM-09:54 AM

GF-05. Indications of Terahertz Spin Transport in the Altermagnet Candidate RuO₂

O. Gueckstock¹, J. Jechumtal², M. Gaerner³, C. Simons¹, Z. Kaspar^{2,4}, T. Seifert¹, T. Kuschel^{3,5}, G. Reiss³, L. Nadvornik², T. Kampfrath¹

¹*Department of Physics, Freie Universität Berlin, Berlin, Germany*, ²*Faculty of Mathematics and Physics, Charles University, Prague, Czechia*, ³*Faculty of Physics, Bielefeld University, Bielefeld, Germany*, ⁴*Institute of Physics, Czech Academy of Sciences, Prague, Czechia*, ⁵*Institute of Physics, Johannes Gutenberg University Mainz, Mainz, Germany*

09:54 AM-10:06 AM

GF-06. Surface roughness effect on dynamic magnetic properties of RuO₂/CoFeB stack

T. Nguyen^{1,2}, H. Naganuma^{3,4}, Y. Saito², S. Maruyama⁵, T. Nguyen⁶, D. Vu⁶, S. Ikeda^{2,1}, T. Endoh^{2,1,5}

¹*Center for Science and Innovation in Spintronics, Tohoku University, Sendai, Miyagi, Japan*, ²*Center for Innovative Integrated Electronic Systems, Tohoku University, Sendai, Miyagi, Japan*, ³*Institute for Advanced Study, Nagoya University, Nagoya, Aichi, Japan*, ⁴*Institute of Materials and Systems for Sustainability, Nagoya University, Nagoya, Aichi, Japan*, ⁵*Graduate School of Engineering, Tohoku University, Sendai, Miyagi, Japan*, ⁶*Institute of Physics, Vietnam Academy of Science and Technology, Hanoi, Hanoi, Viet Nam*

10:06 AM-10:18 AM

GF-07. Giant Tunneling Magnetoresistance in Antiferromagnetic Tunnel Junctions with Non-collinear Mn₃NiN Electrodes

M. A. Elekhitar¹, G. Gurung², D. Shao³, E. Y. Tsybal¹

¹*Physics and Astronomy, University of Nebraska-Lincoln, Lincoln, Nebraska, United States*, ²*Trinity College, University of Oxford, Oxford, United Kingdom*, ³*Institute of Solid-State Physics, Chinese Academy of Sciences, Hefei, China*

10:18 AM-10:45 AM

Break

10:45 AM-11:21 AM

GF-08. Spintronics in “dirty” antiferromagnetic materials

B. L. Zink

Physics & Astronomy, University of Denver, Denver, Colorado, United States

11:21 AM-11:33 AM

GF-09. Temperature dependence of current-induced switching in epitaxial Mn₃Sn thin films

K. Nihei^{1,2}, T. Uchimura^{1,2}, J. Han^{1,3}, S. Kanai^{1,3}, H. Ohno^{1,4}, S. Fukami^{1,4}

¹RIEC, Tohoku Univ., Sendai, Miyagi, Japan, ²Grad School of Eng., Tohoku Univ., Sendai, Miyagi, Japan, ³AIMR, Tohoku Univ., Sendai, Miyagi, Japan, ⁴CSIS, Tohoku Univ., Sendai, Miyagi, Japan

11:33 AM-11:45 AM

GF-10. Distinct pulse-width dependence of two threshold currents driving a noncollinear antiferromagnetic nanodot via spin-orbit torque

Y. Sato^{1,2}, Y. Takeuchi^{3,4}, Y. Yamane^{1,5}, S. Kanai^{1,4}, H. Ohno^{6,7}, S. Fukami^{1,6}

¹Laboratory for Nanoelectronics and Spintronics, RIEC, Tohoku Univ., Sendai, Japan, ²Graduate School of Engineering, Tohoku Univ., Sendai, Japan, ³CMSM, NIMS, Tsukuba, Japan, ⁴WPI-AIMR, Tohoku Univ., Sendai, Japan, ⁵FRIS, Tohoku Univ., Sendai, Japan, ⁶CSIS, Tohoku Univ., Sendai, Japan, ⁷CIES, Tohoku Univ., Sendai, Japan

SESSION GG: MAGNETORESISTANCE IN HETEROSTRUCTURES (GMR, TMR, TAMR)

Co-Chair(s): H. Li, *Analog Devices, Hillsboro, Oregon, United States* and G. Yu, *Institute of Physics, Chinese Academy of Sciences, Beijing, China* and Y. Fan, *Research, Western Digital, San Jose, California, United States*

Friday, October 31, 2025

08:30 AM-12:00 PM

Room 2A

08:30 AM-08:42 AM

GG-01. Enhancing and Decoupling Magnetic Anisotropy and Tunnel Magnetoresistance in CoFe₂O₄/MgO Bilayers via Swift Heavy Ion Irradiation

R. Charak^{1,2}, S. Gautam^{2,3}, S. Garg², Y. Kim⁴, K. Chae⁵

¹Energy Research Centre, Panjab University, Chandigarh, India, ²Dr. SSB Univ Inst of Chemical Engineering & Technology, Panjab University, Chandigarh, India, ³Advanced Functional Materials Lab Pvt. Ltd., Panjab University, Chandigarh, India, ⁴Pohang Accelerator Lab, Pohang University of Science and Technology, Pohang, Korea (the Republic of), ⁵Advanced Analysis & Data Center, Korea Institute of Science & Technology, Seoul, Korea (the Republic of)

08:42 AM-08:54 AM

GG-03. Magnetic Tunnel Junctions utilizing metastable cubic GaN tunnel barrier

H. Kwon^{1,2}, K. Suzuki^{1,2}, D. Kumar², M. Tsujikawa³, T. Roy^{4,3}, S. Miki², M. Shirai^{3,4}, S. Mizukami^{2,4}

¹School of engineering, Tohoku University, Sendai, Japan, ²WPI-Advanced Institute for Materials Research, Tohoku University, Sendai, Japan, ³Research Institute of Electrical Communication, Tohoku University, Sendai, Japan, ⁴Center for Science and Innovation in Spintronics, Tohoku University, Sendai, Japan

08:54 AM-09:06 AM

GG-05. Magnetically Modulated Electrical Switching in an Antiferromagnetic Transistor

C. Chou¹, E. Park¹, J. Ingla-Aynes¹, J. Klein¹, K. Mosina², J. S. Moodera¹, Z. Sofer², F. Ross¹, L. Liu¹

¹MIT, Cambridge, Massachusetts, United States, ²University of Chemistry and Technology Prague, Prague, Czechia

09:06 AM-09:18 AM

GG-06. Metastable Spin Canting Lifetimes in Magnetic Tunnel Junction Artificial Spin Ice

C. Sullivan¹, H. Chen², S. Majetich²

¹Materials Science and Engineering, Carnegie Mellon University, Pittsburgh, Pennsylvania, United States, ²Physics, Carnegie Mellon University, Pittsburgh, Pennsylvania, United States

09:18 AM-09:30 AM

GG-07. Impact of Synthetic Ferrimagnetic Free Layers on Current-in-Plane Giant Magnetoresistance

S. Abdizadeh Kalan¹, V. Amin², S. Emori¹

¹Physics, Virginia Tech, Blacksburg, Virginia, United States, ²Physics, School of Science, Indiana University–Purdue University Indianapolis (IUPUI), Indianapolis, Indiana, United States

09:30 AM-09:42 AM

GG-08. Co-Sputtered Diluted Magnetic Layers for Thermal Compensation in Vortex Magnetic Tunnel Junction Sensors

T. Fernandes¹, P. Araujo¹, R. Macedo¹, P. Freitas^{1,2}, S. Cardoso^{1,2}

¹INESC Microsistemas e Nanotecnologias, Lisboa, Portugal, ²Instituto Superior Técnico, Lisboa, Portugal

09:42 AM-09:54 AM

GG-10. Anomalous Spin Canting and Monopole-Like Excitations in Artificial Spin Ice

S. Majetich¹, C. Sullivan²

¹Physics, Carnegie Mellon University, Pittsburgh, Pennsylvania, United States, ²Materials Science and Engineering, Carnegie Mellon University, Pittsburgh, Pennsylvania, United States

09:54 AM-10:06 AM

GG-11. Predicting Novel Tunnel Barrier Materials for Magnetic Tunnel Junctions using Language Models and First-Principles Screening

S. Islam¹, W. Rogers¹, C. Hu², M. Song², X. Bao², S. Sayed³, J. Incorvia¹

¹Chandra Family Department of Electrical and Computer Engineering, University of Texas at Austin, Austin, Texas, United States, ²Taiwan Semiconductor Manufacturing Company, Taipei, Taiwan, ³Headway Technologies Inc., Milpitas, California, United States

10:06 AM-10:18 AM

GG-12. Phase-resolved Ultrabroadband Terahertz Spectroscopy of Giant Magnetoresistance

Z. Kaspar^{1,2}, O. Gueckstock³, B. D. Mohapatra⁴, G. Schmidt⁴, P. Kubascik², J. Jechumtal², P. Kuzel¹, L. Nadvornik², T. Kampfrath³

¹FZU - Institute of Physics of the Czech Academy of Sciences, Prague, Czechia, ²Charles University, Prague, Czechia, ³Freie Universität Berlin, Berlin, Germany, ⁴Martin-Luther-Universität Halle-Wittenberg, Halle, Germany

10:18 AM-10:30 AM

GG-13. Terahertz spectroscopy of spin-Hall magnetoresistance: case study of YIG|Pt and CoFeB|Pt

P. Kubascik¹, R. Schlitz², O. Gueckstock^{3,4}, O. L. Franke³, D. Reiss³, M. Borchert⁵, M. Busina¹, G. Jakob⁶, K. Olejník⁷, A. Farkas^{1,7}, Z. Kaspar^{1,7}, J. Jechumtal¹, E. Schmoranzero¹, P. Nemeč¹, M. Wolf⁴, Y. Wu^{8,9}, G. Woltersdorf¹⁰, M. Kläui⁶, P. Brouwer³, S. Goennenwein², T. Kampfrath^{3,4}, L. Nadvornik¹

¹Department of chemical physics and optics, Charles University, Prague, Czechia, ²Department of Physics, University of Konstanz, Konstanz, Germany, ³Department of Physics, Freie Universität Berlin, Berlin, Germany, ⁴Department of Physical Chemistry, Fritz Haber Institute of the Max Planck Society, Berlin, Germany, ⁵Max Born Institute for Nonlinear Optics and Short Pulse Spectroscopy, Berlin, Germany, ⁶Institut für Physik, Johannes Gutenberg-Universität Mainz, Mainz, Germany, ⁷Institute of Physics, Czech Academy of Sciences, Prague, Czechia, ⁸Department of Physics, State Key Laboratory of Surface Physics, Fudan University, Shanghai, China, ⁹Shanghai Research Center for Quantum Sciences, Shanghai, China, ¹⁰Institut für Physik, Martin-Luther-Universität, Halle, Germany

SESSION GP: ANTIFERROMAGNETS AND 2D MATERIALS (POSTER SESSION)

Chair(s): Z. Yuan, *Interdisciplinary Center for Theoretical Physics and Information Sciences, Fudan University, Shanghai, China*

Friday, October 31, 2025

09:00 AM-12:00 PM

Exhibit Hall Posters

GP-01-LB. Highly Tunable Electronic States near Chirality-reversed Planar Defect with Magnetic Interstitial Atomic Layer in Magnetic Weyl Semimetals

E. Thareja¹, G. M. Pantano¹, I. Vekhter², J. D. Gayles¹

¹Physics, University of South Florida, Tampa, Florida, United States, ²Physics, Louisiana State University, Baton Rouge, Louisiana, United States

GP-02-LB. Topological Magnetic Insulators for Dissipationless Monostructural Adiabatic Spintronics

J. Hanson-Flores¹, A. Regmi¹, J. Tang², J. Keum⁴, J. Park⁴, R. Cheng³, E. del Barco¹

¹Physics, University of Central Florida, Orlando, Florida, United States, ²Physics, University of California, Riverside, Riverside, California, United States, ³Electrical Engineering, University of California, Riverside, Riverside, California, United States, ⁴Physics and Astronomy, Seoul National University, Seoul, Korea (the Republic of)

GP-04-LB. Octupole-driven spin-transfer torque switching in all-antiferromagnetic tunnel junctions

J. Kang¹, M. Hamdi¹, S. Cheung¹, L. Yuan¹, M. A. Elekhtiar², W. Rogers¹, A. Meo³, P. G. Lim¹, M. N. Tey¹, A. D'Addario⁴, S.

Konakanchi⁵, E. Matt¹, J. G. Athas¹, S. Arpacı¹, L. Wan⁶, S. Mehta⁶, P. Upadhyaya⁵, M. Carpentieri³, V. P. Dravid¹, M. C. Hersam¹, J. Katine⁶, G. Fuchs⁴, G. Finocchio⁷, E. Y. Tsybal², J. M. Rondinelli¹, P. Khalili Amiri¹

¹Northwestern University, Evanston, Illinois, United States, ²University of Nebraska, Lincoln, Nebraska, United States, ³Politecnico di Bari, Bari, Italy, ⁴Cornell University, Ithaca, New York, United States, ⁵Purdue University, West Lafayette, Indiana, United States, ⁶Western Digital Corporation, San Jose, California, United States, ⁷University of Messina, Messina, Italy

GP-06-LB. Altermagnetism and Strain Induced Altermagnetic Transition in Cairo Pentagonal Monolayer

S. Li, Y. Zhang, A. Bahri, X. Zhang, C. Jia

Physics, University of Florida, Gainesville, Florida, United States

GP-08-LB. Sub-Terahertz Spin Pumping in Easy Plane Canted Antiferromagnet α -Fe₂O₃

A. Regmi¹, G. Fritjofson¹, J. Hanson-Flores¹, J. Michel², J. Tang³, F. Yang², R. Cheng³, E. del Barco¹

¹Physics, University of Central Florida, Orlando, Florida, United States, ²Department of Physics, The Ohio State University, Columbus, Ohio, United States, ³Department of Physics and Astronomy, University of California, Riverside, California, United States

GP-09-LB. Magnetoresistance in RuO₂(001)/Co Bilayers

S. Yoon¹, S. Ko², D. Woo¹, H. Jeon¹, H. Cho¹, W. Kim¹, G. Jung¹, K. Kim², J. Jeong³, B. Park⁴, S. Lee¹

¹Semiconductor Engineering, Gachon university, Seong, Korea (the Republic of), ²Physics, KAIST, Dae jeon, Korea (the Republic of), ³Materials Science and Engineering, Chungnam National university, Daejeon, Korea (the Republic of), ⁴Materials Science and Engineering, KAIST, Daejeon, Korea (the Republic of)

GP-10-LB. Angle-Resolved Sub-THz Resonant Absorptions in α -Fe₂O₃

S. Zhou¹, Y. Xiong¹, J. Wu¹, E. Kwao², B. Yang², W. Zhang¹

¹Physics and Astronomy, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, United States, ²Electrical and Computer Engineering, North Carolina Agricultural and Technical State University, Greensboro, North Carolina, United States

SESSION GQ: MULTI-FUNCTIONAL MAGNETIC MATERIALS AND OTHER EMERGING TOPICS (POSTER SESSION)

Co-Chair(s): H. Arava, *Argonne National Laboratory, Lemont, Illinois, United States* and Y. Wu, *Electrical and Computer Engineering, University of Florida, Gainesville, Florida, United States*

Friday, October 31, 2025

09:00 AM-12:00 PM

Exhibit Hall Posters

GQ-01. Investigation of Magnetic Field-Induced Phase Transition $\text{Ni}_{50}\text{Mn}_{28}\text{Ga}_{22}$, Ferromagnetic Shape Memory Alloy

P. Chaitanya¹, S. Smith³, M. Staruch⁴, R. L. Hadimani^{1,2}

¹Department of Mechanical and Nuclear Engineering, Virginia Commonwealth University, Richmond, Virginia, United States,

²Department of Biomedical Engineering, Virginia Commonwealth University, Richmond, Virginia, United States, ³Department of Chemical and Life Sciences Engineering, Virginia Commonwealth University, Richmond, Virginia, United States, ⁴Materials Science and Technology Division, US Naval Research Laboratory, Washington DC, District of Columbia, United States

GQ-02. Influence of Cu Partial Substitution on Saturation Magnetostriction Constant of Polycrystalline CoFe_2O_4

S. Kosugi¹, M. Hisamatsu¹, S. Fujieda², Y. Ohishi¹, H. Muta¹, S. Seino¹, T. Nakagawa¹

¹Graduate School of Engineering, Osaka University, Suita, Osaka, Japan, ²IAMR&D, Shimane University, Matsue, Shimane, Japan

GQ-03. Enhanced Superparamagnetism and Emergent Phenomena at $\text{C}_{60}/\text{PdCo}$ Interface

V. H. Bui¹, Y. T. Pham¹, T. A. Ngo², N. Schulz¹, D. Le¹, T. D. Nguyen², M. Phan¹

¹Department of Physics, University of South Florida, Tampa, Florida, United States, ²Department of Physics, University of Georgia, Athens, Georgia, United States

GQ-04. Binary Magnon-Polaron Formation in a two-dimensional Artificial Magneto-Elastic Crystal

S. Majumder¹, J. L. Drobitch², S. Bandyopadhyay², A. Barman¹

¹Department of Condensed Matter and Materials Physics, S. N. Bose National Centre for Basic Sciences, Kolkata, West Bengal, India,

²Department of Electrical and Computer Engineering, Virginia Commonwealth University, Richmond, Virginia, United States

GQ-05. Optimizing Magnetostrictive Films for Surface Acoustic Wave Devices

Z. Zhang, J. Lim, H. Ni, J. Zuo, A. Hoffmann

Materials Science and Engineering, University of Illinois Urbana-Champaign, Urbana, Illinois, United States

GQ-07. Silicon Nitride Integrated Magneto-Optical Isolator based on Mach-Zehnder Interferometer

B. Moghal¹, B. Stadler²

¹Electrical and Computer Engineering, University of Minnesota, Minneapolis, Minnesota, United States, ²Electrical and Computer Engineering, University of Minnesota, Minneapolis, Minnesota, United States

GQ-08. Transport of Paramagnetic Ions in Porous Materials

P. Andrei^{1,2}, P. Wang¹

¹Department of Electrical and Computer Engineering, Florida State University, Tallahassee, Florida, United States, ²Center for Rare Earths, Critical Minerals, and Industrial Byproducts, National High Magnetic Field Laboratory, Tallahassee, Florida, United States

GQ-09. Processing of Functional Magnetic Composite Filaments for Additive Manufacturing of Broadband Electromagnetic Absorbers

K. Bhandari, M. Patel, R. Barua

Mechanical and Nuclear Engineering, Virginia Commonwealth University, Richmond, Virginia, United States

GQ-10-LB. Dynamic Phase Transitions in Mean-Field Ginzburg-Landau Models: Conjugate Fields and Fourier-Mode Scaling

L. Satynska, D. T. Robb

Physics, Roanoke College, Salem, Virginia, United States

SESSION GR: FUNDAMENTAL PROPERTIES AND COOPERATIVE PHENOMENA (POSTER SESSION)

Co-Chair(s): D. Chakraborty, *Physics & Astronomy, University of Nebraska, Kearney, Nebraska, United States* and R. V. Chopdekar, *Research, Western Digital Corporation, San Jose, California, United States*

Friday, October 31, 2025

09:00 AM-12:00 PM

Exhibit Hall Posters

GR-01. Coexistence of superconductivity and antiferromagnetism in $\text{GdNi}_{0.7}\text{Bi}_2$

J. Moon¹, M. Jung¹, Y. Choi¹, T. Park², S. Yousuf²

¹*Department of Physics, Sogang University, Seoul, Korea (the Republic of)*, ²*Department of Physics, Sungkyunkwan University, Suwon, Korea (the Republic of)*

GR-02. Competing Magnetic Interactions and Functional Implications in Disordered $\text{Co}_2\text{TiSi}_{0.5}\text{Al}_{0.5}$ Heusler Alloy

P. Yadav, B. K. Mani, R. S. Dhaka

Physics, Indian Institute of Technology Delhi, New Delhi, Delhi, India

GR-03-LB. Permanent Magnet Repulsive Force Based Floor structure to mitigate Floor Impact Noise

J. Kim¹, S. Byun¹, S. Noh², W. Lee³, J. Han³, S. Lee³, H. Cho¹

¹*Electric., Electron. & Comm. Engineering Education, Chungnam National University, Daejeon, Korea (the Republic of)*, ²*Korea Research Institute of Ships & Ocean Engineering, Daejeon, Korea (the Republic of)*, ³*Floor Impact Noise Laboratory, Samsung C&T, Seoul, Korea (the Republic of)*

GR-04. Magnetic Field-Modulated Critical Phenomena in van der Waals Ferromagnets

N. T. Duc¹, N. Mudiyansele¹, D. Le¹, H. Srikanth¹, L. Balicas², M. Phan¹

¹*Department of Physics, University of South Florida, Tampa, Florida, United States*, ²*National High Magnetic Field Laboratory, Florida State University, Tampa, Florida, United States*

GR-05. Magnetic ground states in Sc-Fe-Ge kagome systems

Z. Zhang¹, K. Belashchenko², V. Antropov¹

¹*Iowa State University, Ames, Iowa, United States*, ²*University of Nebraska-Lincoln, Lincoln, Nebraska, United States*

GR-06. Magnetic properties of the quaternary Heusler alloy CoFeTiSn

I. Shigeta¹, K. Kuma¹, H. Aoshima¹, T. Yamauchi², R. Umetsu³, T. Kanomata⁴, M. Hiroi¹

¹*Kagoshima University, Kagoshima, Japan*, ²*The University of Tokyo, Kashiwa, Japan*, ³*Tohoku University, Sendai, Japan*, ⁴*Tohoku Gakuin University, Tagajo, Japan*

GR-07. Unconventional magnetic glassiness in noncentrosymmetric Sm_7Pd_3

A. Kumar, A. Biswas, Y. Mudryk

Ames National Laboratory, U.S. Department of Energy, Iowa State University, Ames, Iowa, United States

GR-08. Effect of Second-Neighbor Hopping on Weyl points in the Antiferromagnetic Phase of Rashba-Hubbard Model

A. Jain, D. K. Singh

Department of Physics and Material Science, Thapar Institute of Engineering and Technology, Patiala, Punjab, India

GR-09. Observation of an Odd-Symmetric Planar Hall Effect in $\alpha''\text{-Fe}_{16}\text{N}_2$ Thin Films

Q. Jia, E. Gokce-Polat, A. DeRuiter, Y. Chen, W. Echtenkamp, B. Wolf, J. Wang

University of Minnesota, Minneapolis, Minnesota, United States

GR-10. Emergent Low-Temperature Magnetic Properties of [2.2.2] Cryptand (DHS)-MnBr₄ Compound

D. Le¹, K. Nassar², M. Elolimy², G. M. Pantano¹, I. Spanopoulos², J. D. Gayles¹, M. Phan¹

¹Department of Physics, University of South Florida, Tampa, Florida, United States, ²Department of Chemistry, University of South Florida, Tampa, Florida, United States

GR-11. A Comparative Study of Static and Dynamic Magnetic Responses in Equiatomic Heusler Alloys CoRuXGe (X = Co, Mn)

P. Sharma¹, R. Roy Chowdhury¹, J. Nag², A. Alam², K. G. Suresh², S. Witanachchi¹, M. Phan¹, H. Srikanth¹

¹Department of Physics, University of South Florida, Tampa, Florida, United States, ²Department of Physics, Indian Institute of Technology Bombay, Mumbai, Maharashtra, India

GR-12. Frequency-Dependent Nonlinear Hall Response in Focused-Ion-Beam-Deposited Platinum Cross-Bar Devices

J. Wu¹, S. Zhou¹, R. Sun², S. Lei³, D. Sun², W. Zhang¹

¹Physics and Astronomy, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, United States, ²Department of Physics, North Carolina State University, Raleigh, North Carolina, United States, ³Materials Science and Engineering, University of Central Florida, Orlando, Florida, United States

GR-13-LB. Sub 10 mK Refrigeration and Enhanced Magnetocaloric Effects

A. M. Donald¹, A. G. Duque¹, S. Li¹, C. J. Ollmann¹, R. Schanen², C. Huan¹, R. P. Haley², M. W. Meisel¹, C. Jia¹, R. Gazizulin¹

¹Physics, University of Florida, Gainesville, Florida, United States, ²Physics, Lancaster University, Lancaster, United Kingdom

GR-14-LB. Multiferroic heterostructured devices for energy efficient electronics and biomedical applications

J. Hong

Hubei University of Technology, Wuhan, Hubei, China

SESSION VP1: COMPUTATIONAL METHODS

Chair(s): R. Hertel, *Institut de Physique et Chimie des Matériaux de Strasbourg, Centre National de la Recherche Scientifique, Strasbourg, France*

Wednesday, November 19, 2025

08:30 AM-08:30 PM

Conference Resource Center

VP1-01. Impact of Surface Termination on Magnetic Anisotropy and Gilbert Damping in L1₀-MnAl Thin Films

R. R. Sheikh, R. K. Ghosh

Electronics and Communication Engineering, Indraprastha Institute of Information Technology Delhi, New Delhi, India

VP1-02. Prediction of Hysteresis Behavior in Soft Magnetic Materials Based on Neural Networks and Preisach Model

Y. Qin¹, Z. Li¹, R. Pei^{1,2}, Y. Li¹, J. Li¹, L. Zeng²

¹Department of Electric Engineering, Shenyang University of Technology, Shenyang, China, ²Suzhou Inn-Mag New Energy Ltd, Suzhou, China

VP1-03. Application of DeepONet Based on Multi-branch Residual Structure and Physical Priors in Magnetic Field Prediction

L. Chen, Z. Yang, T. Ben, W. Ke

China Three Gorges University, Yichang, China

VP1-04. Optimizing Recoil Damping in Artillery Systems Using Magnetorheological Fluid

K. Feng, Y. Li

National Defense University, Chung-Cheng Institute of Technology, Taoyuan, Taiwan

VP1-05. Manipulation of the spiking activity of Hodgkin-Huxley-analogue spintronic neuron based on magneto-impedance thin-film structure

G. D. Demin, N. A. Djuzhev

R&D Center "MEMSEC", National Research University of Electronic Technology (MIET), Moscow, Zelenograd, Russian Federation

VP1-06. Integrating Domain Knowledge with Machine Learning for Property Prediction from Chemical Composition

M. Shabir, A. Bashir, F. H. Bhat

Department of Physics, Islamic University of Science and technology, Kashmir, Awantipora, Jammu and Kashmir 192122, India

SESSION VP2: FUNDAMENTAL PROPERTIES AND COOPERATIVE PHENOMENA

Chair(s): Y. Wu, *Electrical and Computer Engineering, University of Florida, Gainesville, Florida, United States*

Wednesday, November 19, 2025

08:30 AM-08:30 PM

Conference Resource Center

VP2-02. Spin Nematic Phase of the Ferromagnetic Dimer System on the Shastry-Sutherland Lattice

T. Sakai^{1,2}

¹School of Science, University of Hyogo, Kamigori, Hyogo, Japan, ²Institutes for Quantum Science and Technology, SPring-8, Sayo, Hyogo, Japan

VP2-03. Magnetization Plateau of the S=1 Spin Ladder with Anisotropies

Y. Hamazaki, R. Hasegawa, T. Kawatsu, H. Suzuki, T. Houda, H. Nakano, T. Sakai, K. Okamoto

School of Science, University of Hyogo, Kamigori, Hyogo, Japan

VP2-04. Field-Induced Spin Nematic Liquid of the S=1/2 Kondo Necklace Spin Chain

R. Hasegawa, Y. Hamazaki, T. Kawatsu, H. Suzuki, T. Houda, H. Nakano, K. Okamoto, T. Sakai

School of Science, University of Hyogo, Kamigori, Hyogo, Japan

VP2-05. Application of Screened Range-Separated Hybrid Functional to Antiferromagnetic 3d-oxides

A. B. Shick^{1,2}, L. Kronik²

¹Department of Condensed Matter Theory, Institute of Physics, Czech Academy of Sciences, Prague, Czechia, ²Department of Molecular Chemistry and Materials Science, Weizmann Institute of Science, Rehovoth, Israel

VP2-06. Magnetism of rare earth intermetallic compound Pr₃Te₄: a neutron diffraction study

R. Nirmla¹, G. Jangam², T. A², A. Morozkin³

¹Physics, Indian Institute of Technology Madras, Chennai, India, ²Tata Institute of Fundamental Research, Mumbai, India, ³Moscow Lomonosov State University, Moscow, Russian Federation

VP2-07. Low symmetry inter-orbital pairing states in Sr₂RuO₄ from DFT+DMFT

C. Moon

Korea Research Institute of Standards and Science, Daejeon, Korea (the Republic of)

VP2-08. Large-Scale Epitaxial Growth of Fe₃GaTe₂/Graphene van der Waals Heterostructures with Above-Room-Temperature Ferromagnetism

T. Shinwari¹, K. Khan¹, H. Lv¹, A. Kassa¹, F. Munnik², S. Josephy³, A. Trampert¹, V. Ukleev⁴, C. Luo⁴, F. Radu⁴, J. Herfort¹, M. Hanke¹, J. J. Lopes¹

¹Paul-Drude-Institut für Festkörperelektronik, Leibniz-Institut im Forschungsverbund Berlin e.V, Berlin, Germany, ²Helmholtz-Zentrum Dresden-Rossendorf, Institute of Ion Beam Physics and Materials Research e.V, Dresden, Germany, ³QZabre AG, Neunbrunnenstrasse 50, 8050, Zürich, Switzerland, ⁴Helmholtz Zentrum Berlin for Materialien und Energie, Albert-Einstein Straße 15, 12489, Berlin, Germany

SESSION VP3: HARD MAGNETS AND FUNCTIONAL MAGNETIC MATERIALS

Chair(s): T. Gottschall, *Dresden High Magnetic Field Laboratory, Dresden, Germany*

Wednesday, November 19, 2025

08:30 AM-08:30 PM

Conference Resource Center

VP3-01. Effect of Solution Temperature on the Microstructures and Magnetic Properties of Fe-Rich Sm-Co-Fe-Cu-Zr Permanent Magnets

J. Yang¹, D. Zhang², H. Li¹, H. Sun¹, Z. Wang¹

¹Anyang Institute of Technology, Anyang, Henan, China, ²Beijing University of Technology, Beijing, China

VP3-02. Hard magnetic properties of Sm-Fe-Ga-C melt-spun ribbons with SmFe₅ phase

T. Saito¹, D. Nishio-Hamane²

¹Chiba Institute of Technology, Narashino, Japan, ²University of Tokyo, Kashiwa, Japan

VP3-03. (Nd,Ce)-Fe-B core-shell magnet simulation using mumax3 software

C. Li, J. Zuo, Y. Li, M. Zhang

School of Science, Inner Mongolia University of Science and Technology, Baotou, China

VP3-05. Influence of ytterbium-doping on the structural, magnetic and dielectric properties of gallium ferrite nanoparticles

T. Han, C. Lai, Y. Chen

Department of Applied Physics, National University of Kaohsiung, Kaohsiung, Taiwan

VP3-06. Influence of device structure on magnetoelectric coupling in laminate composites of textured Fe-Ga thin sheet and PZT

J. Liu^{1,2}, Z. He^{1,2}, S. Hu^{1,2}, Y. Sha³, L. Chen^{1,2}, L. Zuo³

¹School of Materials Science and Engineering, Shenyang University of Technology, Shenyang, China, ²Shenyang Key Laboratory of Advanced Structural Materials and Applications, Shenyang University of Technology, Shenyang, China, ³Key Laboratory for Anisotropy and Texture of Materials (Ministry of Education), Northeastern University, Shenyang, China

VP3-08. Structural, magnetic and electrical transport properties of YMnAl

P. Kharel, M. Anas

Chemistry, Biochemistry and Physics, South Dakota State University, Brookings, South Dakota, United States

VP3-09. Carbon-Driven Enhancement of Magnetic Response in Pyrolyzed Copper–Porphyrin Nanocomposites

S. Figueroa, V. Pena Perez, F. Iglesias, A. Khodagulyan, O. Bernal, A. N. Kocharian

Physics and Astronomy, California State University Los Angeles, Los Angeles, California, United States

VP3-10. Characterization of Magnetic Core-shell Nanoparticles in Different Carbon Matrices under Annealing by Oxygen and Nitrogen

V. Pena Perez, S. Figueroa, F. Iglesias, A. Khodagulyan, O. Bernal, A. N. Kocharian

Physics and Astronomy, California State University Los Angeles, Los Angeles, California, United States

SESSION VP4: MAGNETIC SENSORS, HIGH FREQUENCY DEVICES, AND POWER ELECTRONICS II

Co-Chair(s): S. Ajia, *Department of Electrical Engineering, Tohoku University, Sendai, Miyagi, Japan* and K. Srinivasan, *Electrical and Computer Engineering, Boise State University, Boise, Idaho, United States*

Wednesday, November 19, 2025

08:30 AM-08:30 PM

Conference Resource Center

VP4-01. Measurement of added mass of a spherical model in water using Magnetic Suspension and Balance System

N. Riho, H. Fujiwara

Mechanical engineering, National Defense Academy, Yokosuka, Kanagawa, Japan

VP4-02. Flyback Converter Design for Satellite Data Server Auxiliary Power Systems

Z. Lin, K. Zheng, T. Zhang, Y. Zhuang, Y. Zhang

College of Electrical Engineering and Automation, Fuzhou University, Fuzhou, Fujian, China

VP4-03. Analysis and Design of a Dual-Output Wireless Power Transfer System

J. Wang¹, D. Ahn², C. Liu¹, H. Xie¹, X. Mao¹, Y. Zhang¹

¹*College of Electrical Engineering and Automation, Fuzhou University, Fuzhou, China,* ²*Department of Electrical Engineering, Incheon National University, Incheon, Korea (the Republic of)*

VP4-04. Electromagnetic Shielding Analysis of Canned Magnetic Bearings

H. Jiang^{1,2}, Z. Su^{1,2}, Y. Wei^{1,2}

¹*Naval University of Engineering, Wuhan, Hubei, China,* ²*East Lake Laboratory, Wuhan, Hubei, China*

VP4-06. Novel Design of Dual-Coil Microspeaker for Low-Frequency Sound Pressure Level Improvement in Tablet

J. Park¹, K. Park¹, D. Xu², S. Hwang¹

¹*Department of Mechanical Engineering, Pusan National University, Busan, Korea (the Republic of),* ²*School of Mechatronic Engineering and Automation, Shanghai University, Shanghai, China*

VP4-07. Fundamental Consideration related to the Construction of a Bi-directional Wireless Power Transfer System for Independent Operation of Flying Drones.

T. Nitta, Y. Osaki, F. Sato, S. Miyahara, O. Ito

Tohoku Gakuin University, Sendai, Miyagi, Japan

VP4-08. Construction of Transformer Equivalent Circuit Model Based on Piecewise Linear Reluctance

Z. Ye, Y. Wang

School of Mechanical and Electrical Engineering, China University of Mining and Technology-Beijing, Beijing, China

VP4-09. Remanence Evaluation of Transformer Core Based on Magnetic Barkhausen Noise

L. Chen^{1,2}, L. Wu¹, T. Ben¹, H. Huang¹

¹*College of Electrical Engineering and New Energy, China Three Gorges University, Yichang, Hubei, China,* ²*Hubei Provincial Engineering Technology Research Center for Power Transmission Line, China Three Gorges University, Yichang, Hubei, China*

VP4-10. Basic Consideration about Constructing Cell-culture Management System by Functionalized Petri Dishes with Wireless Power Transfer

Y. Hara¹, F. Sato¹, O. Ito¹, S. Miyahara¹, K. Sagara², S. Sasaki², T. Abe³, K. Inada³

¹*Tohoku Gakuin University, Sendai, Miyagi, Japan,* ²*Hikaridenshi Co., Ltd., Osaki, Miyagi, Japan,* ³*NITTOKU Co., Ltd., Fukushima, Japan*

VP4-12. Calculation and Optimization Design of Parasitic Capacitance in High-Frequency Transformers

J. Liu, Y. Li, S. Yue, Z. Wan, Z. Cao

Hebei University of Technology, Tianjin, China

VP4-15. Energy Harvester Based on FeCoV-PZT Laminated Magnetolectric Composite for Transformer Temperature Monitoring System

C. Zhang, Z. Wang

Faculty of Electrical Engineering, Hebei University of Technology, Tianjin, China

VP4-17. Noninvasive Current Measurement in Multi-conductor Cables with TMR Sensor Array

C. Zhang, S. Zhao

School of Electrical Engineering, Hebei University of Technology, Tianjin, China

VP4-18. Quantifying Magnetic Degradation in Laser-Cut Electrical Steel: A Domain-Level Study with Angle-Dependent Magnetization

R. Shahbaz^{1,2}, C. Zhang¹, H. Fatima³, H. Zhang¹

¹*Electrical Engineering, State Key Laboratory of Reliability and Intelligence of Electrical Equipment, Hebei University of Technology, Tianjin, Hebei, China,* ²*Electrical Engineering, Hebei Key Laboratory of Equipment and Technology Demonstration of Flexible DC Transmission, Hebei University of Technology, Tianjin, Hebei, China,* ³*Physics, Xidian University, Xi'an, Shaanxi, China*

VP4-19. Damping Capacitor for Suppression of Ringing Caused by Parasitic Components in PCBs and EMI Reduction

H. Park¹, J. Cheon¹, S. Kim², D. Kim¹

¹*Yeungnam University, Gyeongsan-si, Gyeongsangbuk-do, Korea (the Republic of),* ²*Gyeongbuk Technopark, Gyeongsan-si, Gyeongsangbuk-do, Korea (the Republic of)*

SESSION VP5: NEW APPLICATIONS AND OTHER EMERGING TOPICS II

Chair(s): K. Sriram, *Electronics and Electrical Engineering, IIT Guwahatti, Assam, India*

Wednesday, November 19, 2025

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VP5-01. Machine Learning Estimation of Curie Temperature for Ferromagnetic Perovskites

M. Shabir, F. H. Bhat

Physics, Islamic University of Science and Technology, Pulwama, Jammu and Kashmir, India

VP5-02. Loss research of graphene copper flat wire electrical machinery considering deformation and temperature effects

J. Li¹, Z. Li¹, R. Pei^{1,2}, Y. An¹

¹*Electrical Engineering, Shenyang University of Technology, Shenyang, China,* ²*Suzhou INN-MAG New Energy Technology Co.. Ltd., Suzhou, China*

VP5-03. High-Tc SQUID-Based Ultra-Low Field MRI in Unshielded Environments

S. Liao, H. Huang

Institute of Electro-Optical Engineering, National Taiwan Normal University, Taipei city, Taiwan

VP5-04. Multi-harmonic Response of Superparamagnetic Nanoparticles As a Function of Particle Size and Concentration Across Multiple Optical Configurations

M. Syed, C. Su, S. Reza

Physics, Optical Engineering and NanoEngineering, Rose-Hulman Institute of Tech, Terre Haute, Indiana, United States

VP5-05. Research on Magnetic Anomaly Noise Suppression Method Based on Magnetic Fields Induced by Three-dimensional Short Peak Ocean Waves

Y. Xu, J. Qiu, C. Cao, H. Sun, B. Fan, X. Zeng

College of Optoelectronic Engineering, Chongqing University, Chongqing, China

VP5-06. Mutual Suppression of Polar and Magnetic Orders in Charge-Compensated Fe-Substituted $\text{Bi}_{0.5}\text{Na}_{0.5}\text{TiO}_3$: Evidence of inverse Magnetoelectric Coupling

M. Kumari^{1,2}, R. Chatterjee¹

¹Physics, Indian Institute of Technology, New Delhi, New Delhi, India, ²HDD, Western Digital Corporation, San Jose, California, United States

SESSION VP6: SOFT MAGNETIC MATERIALS III

Co-Chair(s): S. C. Mills, *Materials Science and Technology, US Naval Research Laboratory, Washington, District of Columbia, United States* and D. Hedlund, *Department of Electrical and Computing Engineering, University of Central Florida, Orlando, Florida, United States*

Wednesday, November 19, 2025

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VP6-01. Role of Surfactants in Enhancing Colloidal Stability and Magnetic Hyperthermia Efficiency of Fe_3O_4 Nanoparticles.

S. Singh¹, Y. Kaur², B. Chudasama¹

¹Physics, Thapar Institute of engineering and Technology, Patiala, Punjab, India, ²Physics, Maharishi Markandeshwar University, Mullana, Ambala Cantt, Haryana, India

VP6-04. Giant Magnetoimpedance and Magneto-optical Characterization of Amorphous Alloys

C. S. Martins¹, V. Bellintani¹, F. A. Albuquerque², A. D. Santos³, J. H. Severo⁴

¹DEG, FATEC, São Paulo, SP, Brazil, ²Energy and Nuclear Research Institute, IPEN/CNEN, São Paulo, SP, Brazil, ³Institute of Physics, University of Sao Paulo, São Paulo, SP, Brazil, ⁴Institute of Physics, university of Sao Paulo, São Paulo, SP, Brazil

VP6-06. Analysis and Calculation of Magnetostrictive Properties of Thin-gauge Low-loss Electrical Steel Sheets Considering Stress Effects

J. Wang¹, D. Ma¹, Z. Chen², P. Meng¹, L. Zeng³, R. Pei^{1,3}

¹Shenyang University of Technology, Shenyang, China, ²Hunan CRRC Times Electric Drive Technology Co., Ltd., ZhuZhou, China, ³SuZhou Inn-Mag New Energy Ltd, SuZhou, China

VP6-07. Comparative Research on the Magnetic Properties of High Permeability Soft Magnetic Materials and Conventional Silicon Steel Under Stress-electromagnetic Coupling

X. Liu¹, J. Li¹, Z. Li¹, S. Zhang¹, Z. Chen², R. Pei^{3,1}, L. Zeng³

¹Shenyang University of Technology, Shenyang, China, ²Hunan CRRC Times Electric Drive Technology Co., Ltd., Zhuzhou, China, ³Suzhou InnMag New Energy Ltd., Suzhou, China

VP6-08. Research on Magnetic Properties in Soft Magnetic Composites Considering Temperature and Stress Effect

Y. Li¹, Z. Li¹, B. Yang¹, R. Pei¹, L. Zeng²

¹Shenyang University of Technology, Shenyang, Liaoning, China, ²Suzhou InnMag New Energy Ltd, Suzhou, China

VP6-09. Analysis of Amorphous Alloy-Ultra-Thin Silicon Steel Hybrid Iron Core for High-Speed Electrical Machine

J. Feng¹, X. Lu¹, Z. Li¹, J. Wang¹, L. Zeng², R. Pei^{1,2}

¹Shenyang University of Technology, Shenyang, Liaoning, China, ²Suzhou InnMag New Energy Ltd, Suzhou, Jiangsu, China

VP6-10. Measuring Magnetostriction in Electric Motor Stator Cores Considering Manufacturing Factors and Material Anisotropy

L. Chen¹, H. Huang¹, T. Ben^{1,2}, L. Wu¹

¹College of Electrical Engineering and New Energy, China Three Gorges University, Yichang City, China, ²Hubei Provincial Research Center on Microgrid Engineering Technology, China Three Gorges University, Yichang City, China

VP6-11. Optimization of amorphous magnetostriction prediction model considering the effect of stresses

X. Liu¹, X. Lu¹, Z. Li¹, J. Feng¹, L. Zeng², R. Pei^{1,2}

¹Shenyang University of Technology, Shenyang, Liaoning, China, ²Suzhou InnMag New Energy Ltd, Suzhou, Jiangsu, China

VP6-12. Analysis of Stator Core Losses in Motors Made of Amorphous Alloy Materials Considering Temperature and Compressive Stress Factors

X. Lu¹, D. Ma¹, J. Feng¹, N. Zhang¹, L. Zeng², R. Pei^{1,2}

¹Department of Electrical Engineering, Shenyang University of Technology, Shenyang, Liaoning, China, ²Suzhou INN-MAG New Energy Technology Co., Ltd., Suzhou, Jiangsu, China

VP6-13. Effect of Ytterbium substitution on the structural and magnetic properties of cobalt ferrite nanoparticles

T. Han, F. Huang, T. Du

Department of Applied Physics, National University of Kaohsiung, Kaohsiung, Taiwan

VP6-15. Observation and Quantitative Analysis of Magnetic Domains in Grain-Oriented Silicon Steel under Two-Dimensional Magnetization

C. Zhang^{1,2}, G. Sun^{1,2}, Y. Li^{1,2}, W. Meng^{1,2}

¹State Key Laboratory of Intelligent Power Distribution Equipment and System, Hebei University of Technology, Tianjin, China, ²Hebei Key Laboratory of Equipment and Technology Demonstration of Flexible DC Transmission, Hebei University of Technology, Tianjin, China

VP6-16. On the analysis of the skin effect on the loss evaluation of soft magnetic materials under broadband magnetization

L. Chen^{1,2}, L. Tan¹, T. Ben¹, H. Huang¹, B. Huang¹

¹College of Electrical Engineering and New Energy, China Three Gorges University, Yichang, Hubei, China, ²Hubei Provincial Research Center on Microgrid Engineering Technology, China Three Gorges University, Yichang, Hubei, China

VP6-17. Structural and Magnetic Investigation of Fe doped $Mn_{3-x}Fe_xO_4$ ($x \leq 0.1$)

S. Yoon

Department of Physics, Gunsan National University, Gunsan, Korea (the Republic of)

VP6-18. Research and Analysis of Different Thickness Silicon Steels for an Ultra High-Speed PMSM

M. Cheng, Z. Li, Y. Li, R. Pei

Shenyang University of Technology, Shenyang, Liaoning, China

VP6-19. Magneto-Optical Investigation of Magnetization Reversal and Anisotropy in Amorphous Co-Based Microwires

M. Lostun, I. Murgulescu, H. Chiriac, T. A. Ovari, N. Lupu

National Institute of Research and Development for Technical Physics, Iasi, Romania

VP6-20. Effect of Lamination Forming Process on the Magnetic Properties of Electrical Steel Core

W. Li¹, Y. Li¹, Z. Xie¹, L. Zeng², R. Pei^{1,2}

¹Shenyang University of Technology, Shenyang, China, ²Suzhou Inn-Mag New Energy Ltd., Suzhou, China

VP6-21. A Mean Field Approach to Analyzing the Magnetization of Interacting Ferrimagnetic Particles under Superparamagnetic Conditions

S. Rajput, S. Tiwari

Department of Physics and Materials Science, Thapar Institute of Engineering and Technology, Patiala, Punjab, India

SESSION VP7: SPINTRONIC MATERIALS AND DEVICES

Chair(s): S. Husain, *Material Science and Engineering, University of California, Berkeley, Berkeley, California, United States*

Wednesday, November 19, 2025

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VP7-01. Spin-orbit torque magnetization switching in CoFeB/Ta/CoFeB tri-layer thin films

K. Okada, M. Matsuura, Y. Saito, N. Tezuka

Tohoku University, Sendai, Miyagi, Japan

VP7-02. Thermal noise induced probability switching in SOT-MTJs based on spin-circuit simulation

T. Huang, S. Hu

Shenzhen Technology University, Shenzhen, Guangdong, China

VP7-03. High-Throughput SEM Imaging of Nanoscale Metal Grains for Heat Assisted Magnetic Recording

M. Hauwiller, C. Mann, P. Mach, T. Zhao, T. Gao, A. Abdurahman, S. Hernandez, K. Terry, M. Kautzky

Seagate Technology, Bloomington, Minnesota, United States

VP7-05. Field-free magnetic resonance detection in the terahertz band using $\text{Gd}_{3/2}\text{Yb}_{1/2}\text{BiFe}_5\text{O}_{12}$

T. Tsuchida¹, Y. Ishikawa², T. Ito², K. Kawagita², Y. Goto², K. Yabushita², H. Fukumoto², Y. Fujii², K. Mikuni³, T. Satoh³, M. Goto^{1,4}

¹*Department of Electrical and Electronics Engineering, University of Fukui, Fukui, Japan*, ²*Research Center for Development of Far-Infrared Region, University of Fukui, Fukui, Japan*, ³*Department of Physics, Institute of Science Tokyo, Tokyo, Japan*, ⁴*Center for Spintronics Research Network (CSRN-Osaka), Osaka, Japan*

VP7-06. Micromagnetic study of spin wave transmission in bent ferrimagnetic strips.

L. Sánchez-Tejerina, L. M. Moreno-Ramírez, O. Alejos

Universidad de Valladolid, Valladolid, Valladolid, Spain

VP7-07. Theoretical Insights Into Room-temperature Ferromagnetism of Metal-doped MoSe_2 Monolayer

B. Narangere, M. Adiya, D. Odkhuu

Physics, Incheon National University, Incheon, Korea (the Republic of)

VP7-09. Withdrawn

VP7-10. Spin-Damping Dynamics Inspired Optimizer for Neural Networks

S. Ghaderi, A. D. Kent

Physics, New York University, New York, New York, United States

VP7-11. Magnetic Multilayer (MMLs) Domain Wall-Driven dynamically coupled hybrid vortex structures for mobile Majorana zero modes

K. K. Mishra

Physics & Astrophysics, University of Delhi, Delhi, Delhi, India

VP7-12. Revisiting the Role of Symmetry for High Performance Magnetic Tunnel Junctions

S. Chakraborti¹, A. Sharma²

¹*Electrical Engineering, Indian Institute Of Technology Ropar, Rupnagar, Punjab, India,* ²*School of Computing and Electrical Engineering, Indian Institute of Technology, Mandi, Mandi, Himachal Pradesh, India*

VP7-13. Magnetic properties of Fe_{5-x}GeTe₂/WSe₂ van-der-Waals heterostructures

H. Lv¹, J. Herfort¹, T. Shinwari¹, K. Khan¹, M. Hanke¹, A. Trampert¹, R. Engel-Herbert¹, C. Chen², J. M. Redwing², J. J. Lopes¹

¹*Paul-Drude Institut für Festkörperelektronik, Berlin, Germany,* ²*Pennsylvania State University, University Park, Pennsylvania, United States*

A

A, T: VP2-06
 Ababneh, E M.: **DR-09**
 Abad, A: DC-07
 Abbas, H: CF-03, **CF-10**, ER-07, **ER-08**
 Abbott, C: EE-05
 Abdelhafiz, H: **DR-12**
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 Abdizadeh Kalan, S: **GG-07**
 Abdul Karim, M: **GC-04**
 Abdurahman, A: VP7-03
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 Adiya, M: BG-13, VP7-07
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 Agarwal, P: **FE-07**
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 Ahn, J: **FP-06**
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 Choi, G: **BA-03**
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 Deka, A: **BE-03, DG-03**
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 Ohishi, Y: GQ-02
 Ohno, H: BA-02, DF-06, DF-11, GF-09, GF-10
 Ohshima, R: DR-04, FR-01
 Ohtani, T: DG-11
 Ohtani, T: BP-04-LB
 Ohya, S: CF-11, DF-08
 Ojo, A I.: AR-08, CR-13, CR-14, DC-10, **FD-09**, FR-10
 Oka, C: CQ-02
 Okada, K: **VP7-01**
 Okada, S: BD-04, **BG-11**
 Okada, Y: CG-06
 Okamoto, H: FC-08
 Okamoto, K: VP2-03, VP2-04
 Okamoto, S: AQ-02
 Okita, K: AP-03, FC-08
 Oleaga, A: **AE-12**, **BE-10**
 Olejník, K: GF-04, GG-13
 Oles, E: AC-07, CE-03, FG-07
 Ollmann, C J.: GR-13-LB
 Olson, T: EG-03
 Onat, B: FC-14

Onderko, F: FD-03
 Onishi, K: DG-01
 Ono, H: DG-01
 Ono, N: AQ-02
 Ono, S: AD-09, CD-03, CD-04
 Ono, T: ED-05, **GA-02**
 Oogane, M: AR-12, BR-08, CR-10, DR-06, DR-07, DR-08
 Orlova, T: CE-05
 Oropesa, A E.: **CR-12**
 Ortiz, B: AG-03
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 Osaki, Y: VP4-07
 Osellame, R: DB-02
 Ostapyuk, V: DQ-05
 Ostatnický, T: CC-04
 Ota, K: ER-05
 Otaki, T: EE-13
 Otani, Y: ED-11, FA-05
 Otsuka, R: DG-01
 Otyepka, M: AR-13
 Oulton, R: DB-01
 Ourdani, D: AD-09
 Ovari, T A.: VP6-19
 Oyagi, S: DG-01
 Oyarzún, S: ED-07
 Ozaki, K: BD-04
 Ozawa, Y: FC-08

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P. Chhetri, T: BD-06
 Pachat, R: CD-04
 Padgett, A S.: **BD-07**
 Padmanabhan, P: FF-09
 Page, M: DE-07
 Pal, P: **BF-10**, **DE-06**
 Palai, D: DQ-08
 Palanivel, U: AR-11-LB
 Palau, A: CD-01
 Palomino Lopez, A: CA-01
 Pan, C: DD-14
 Panagopoulos, C: BP-06
 Pancaldi, M: BC-09
 Pané, S: BB-03
 Pantano, G M.: **AC-04**, GF-03, GP-01-LB, GR-10
 Panzeri, M: DB-02
 Papp, Á: GD-01
 Paranthaman, M P.: FQ-04-LB

Pardo-Almanza, M: CG-06
 Parekh, K: CQ-04
 Park, B: AF-04, AP-10-LB, BA-03, BF-07, GP-09-LB
 Park, E: GG-05
 Park, H: **VP4-19**
 Park, H: FP-02
 Park, J: GP-02-LB, **TU-02**
 Park, J: BG-03, ER-04
 Park, J: BQ-04, **VP4-06**
 Park, J: FG-08
 Park, J: EQ-03
 Park, K: **BG-08**
 Park, K: FP-04, VP4-06
 Park, T: GR-01
 Parkin, S: AC-05, DQ-07, **GA-01**
 Parmar, H: **DD-12**
 Parmenter, C: CG-02
 Paslar, M: AP-06, **FC-11**
 Patel, H H.: **CQ-04**
 Patel, M: GQ-09
 Pathak, A: DQ-02, DQ-03
 Pathak, S: AR-01
 Pathare, S: DG-01
 Patil, S: CE-09
 Patra, A K.: DE-10
 Patra, L: BE-13
 Paul, A: **DD-13**
 Paz Gonzalez, K: AQ-05, FC-05
 Peddis, D: BE-10
 Pedersoli, E: BC-09
 Peer, M: BR-10
 Pei, R: VP1-02, VP5-02, VP6-06, VP6-07, VP6-08, VP6-09, VP6-11, VP6-12, VP6-18, VP6-20
 Pekarek, T M.: **AR-09**
 Pellizzi, N: DB-02
 Pena Perez, V: VP3-09, VP3-10
 Peng, B: BQ-05
 Percival, S: BD-07
 Pérez-Álvarez, L: DG-12
 Peria, W K.: DD-07, GE-01
 Perna, S: **CH-08, EC-12, EE-09**
 Peroor, R: **DC-05**, DE-07
 Peters, F: BC-07
 Peters, J: **FF-04**
 Peterson, C L.: AP-06, FC-11
 Peterson, O R.: EG-04
 Peterson, T: AD-04, BF-01

Petit, M: EB-02
 Petrik, P: DD-01
 Petti, D: DB-02
 Pham, Y T.: GQ-03
 Phan, M: AC-03, AP-07, **BB-02**, BR-07, CR-14, DQ-06, FC-15, FD-09, FG-02, GD-08, GQ-03, GR-04, GR-10, GR-11
 Phan, N: FF-04
 Phatak, C: DC-01, EE-04
 Phelan, D: CE-08
 Piao, X: CA-01
 Piccolo, E: AR-10
 Pilati, V: BB-04, FC-09
 Piramanayagam, S: **AF-07**, ED-08
 Pirro, P: DB-02
 Pitt, W: DC-11
 Pokhrel, H: DR-10
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 Polakovic, T: EE-04
 Polkotuwa, P: BP-04-LB
 Pollard, S: DR-10
 Poon, A: DG-05
 Popov, M: DQ-09
 Poree, V: CD-04
 Porro, J: **FG-13**
 Posti, R: CE-09, **FE-02**, FR-08
 Pothuganti, J: AP-09-LB
 Poudel, N: FQ-04-LB
 Poulo, A S.: **DR-05**, ER-09
 Powalla, L: FD-08
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 Prasad, B: BE-03
 Prasad, K: EF-10
 Prestwood, D: GE-08
 Priese, C: BD-03
 Proscia, N: EF-05
 Provino, A: BE-10
 Psaroudaki, C: BP-06
 Puebla-Hellmann, G: CG-01
 Puente-Orench, I: AE-12
 Pufall, M: DD-07, GE-01
 Pulickel M., A: AE-10
 Pulse, M: CD-05
 Puthirath Balan, A: **AE-10, FE-04**
 Pyo, J: FG-08

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Qian, S: **EC-04**

Qin, Y: **VP1-02**
 Qiu, J: VP5-05
 Qu, D: DR-11, **GF-01**, GF-02
 Quirós, C: BC-12
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Raabe, J: DB-02
 Rackham, J: DC-12
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 Radnoczi, G Z.: DD-01
 Rado, J: DQ-09
 Radu, F: VP2-08
 Radulov, I: DD-01
 Raftrey, D W.: DC-02, DC-04
 Rahaman, H: ED-08
 Rahman, R: CH-09
 Rai, R K.: EF-06
 Raimondo, E: **DA-04**
 Rajib, M: CH-03, DF-05, FF-03
 Rajnak, M: CQ-04
 Rajput, S: **VP6-21**
 Rakheja, S: EC-04
 Ralph, D C.: FD-08, FE-01
 Ramos, L: **CR-13**
 Ramu, M: AF-07, ED-08
 Rana, K: **DG-10**
 Rao, S: BC-14, BF-06, CA-01, GD-07
 Raskin, J: FC-09
 Ravelosona, D: AD-09, **BR-12**, CD-03, CG-03, GD-06
 Ravelosona, D: CD-04, FG-11
 Ray, S: EF-03
 Raznjevic, S: CH-07
 Reddinger, J A.: **GE-05**
 Reddy, V: AR-01
 Redondo, C: FG-13
 Redwing, J M.: VP7-13
 Reese, B L.: EG-04
 Regmi, A: GP-02-LB, **GP-08-LB**
 Rego, S: BG-02
 Rehm, L: XA-03
 Reichlova, H: EB-02, GF-04
 Reif, D D.: BE-08
 Reisbick, S: CG-07
 Reiser, P: FE-04
 Reisinger, J: BR-09, BR-10
 Reiss, D: GG-13
 Reiss, G: GF-04, GF-05

- Remy, Q: EG-09
 Ren, Z: GC-08
 Renucci, P: **AA-01**
 Reparaz, J: EF-01
 Resta, A: AD-09, CD-04
 Retterer, S: CD-08
 Reyes-Osorio, F: **EE-11**
 Reyren, N: CG-03
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 Reznik, A: DQ-09
 Rhensius, J: CG-01
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 Richards, D: BD-07
 Richter, H J.: BF-03
 Rickhaus, P: DC-03
 Riho, N: **VP4-01**
 Riley, C R.: BD-07
 Rinaldi, C: **ED-01**
 Río-López, N: FG-13
 Riso Barbosa Jr., J: BE-08
 Rivard, C: EE-08
 Rivas, M: **BB-04**, FC-09
 Rivkin, K: **BR-01**, **CG-09**, **DR-14**, **EC-06**, **EG-11**, **EG-13**
 Robb, D T.: GQ-10-LB
 Robbins, M: XA-03
 Rockwell, K: BC-09
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 Rodrigues, D: AR-10
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 Rodríguez Gutiérrez, H: CR-13, DC-10, FG-02, FR-10
 Rogers, D: **AE-02**
 Rogers, E: FF-07
 Rogers, W: GG-11, GP-04-LB
 Rojas-Sanchez, J: AA-01
 Rondinelli, J M.: GP-04-LB
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 Ross, C A.: BC-11, CH-03
 Ross, F: GG-05
 Roussigné, Y: AD-09, CD-04
 Rovillain, P: EC-11
 Roy, D: AF-02
 Roy, S: **ER-13-LB**
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- Roy Chowdhury, M: VP7-09
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 Rushforth, A: CG-11
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 Šmejkal, L: CG-11
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- S**
 Sa, J: FC-03
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 Sadler, C: CD-05, **DQ-10**
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 Saha, S: **DE-10**
 Sahoo, M: DC-06
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 Sai, R: **BD-08**
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 Sait, C: CH-06
 Saito, S: BR-04, BR-05, CR-04
 Saito, T: **VP3-02**
 Saito, Y: **AF-10**, ED-05, GF-06, VP7-01
 Saitoh, E: BC-03, GE-08
 Sajerman, K: DD-01
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 Sakai, L: BR-08
 Sakai, T: **VP2-02**, VP2-03, VP2-04
 Sakamoto, S: **BA-04**
 Sakhya, A: AG-03
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 Sakurai, J: CQ-02
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 Salazar, H: GC-03
 Salvador, M: BB-04, FC-09
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 Samarth, N: **CE-06**
- Sampson, E: EC-07
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 Santhosh, P: DQ-08
 Santiso, J: GF-04
 Santos, A D.: VP6-04
 Santos, T: AF-05, BF-03, BF-04
 Sanyal, B: **GB-04**
 Sanz Hernandez, D: DC-01
 Sarkar, T: VP7-09
 Sarker, S: **CH-03**
 Sasaki, D: CD-08
 Sasaki, S: BR-08
 Sasaki, S: BQ-06, VP4-10
 Sasaki, T: CB-05
 Sasaki, Y: EG-06
 Sassi, Y: BR-12, **CG-03**, **GD-06**
 Satapathy, S: DC-02, DC-04
 Sato, F: BQ-06, VP4-07, VP4-10
 Sato, K: **CR-03**
 Sato, K: AQ-07
 Sato, Y: AD-05, DF-08
 Sato, Y: BA-02, **GF-10**
 Satoh, T: VP7-05
 Satynska, L: **GQ-10-LB**
 Savero-Torres, W: EF-01
 Savostin, E: **EC-05**
 Sawruk, E: AQ-10
 Saxena, A: **AQ-01**
 Sayed, S: GG-11
 Scafuri, L A.: DC-05
 Schaeffer, K: **DQ-02**, DQ-03
 Schäfer, S: GE-10
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 Schieffer, P: CD-09
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- Schlueter, C: CR-09
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 Schmitt, T: GC-09
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 Schmoranzero, E: **CC-04**
 Schneider, M: DD-07
 Schnitzer, N: BG-02
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 Schöffmann, P: AD-09
 Schorr, L: **CQ-03**
 Schrefl, T: BE-07, CH-07
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 Schuster, S: BR-09, BR-10
 Schweizer, M R.: EE-12
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 Scott-Vandusen, A: BB-03
 Seagar, A: DG-07
 Seal, A: AG-03
 Seehra, M S.: VP7-09
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 Seino, S: ER-05, GQ-02
 Sekertekin, Y: **DE-05**
 Sekino, M: **BB-05**, FC-01, FC-04, FC-06, FC-07, FP-01
 Sepehri-Amin, H: EG-05
 Serga, A A.: EE-12
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 Seth, S: ER-13-LB
 Setti, G: AE-06, AE-08, DE-03
 Severo, J H.: VP6-04
 Sha, Y: VP3-06
 Shabir, M: **VP1-06**, **VP5-01**
 Shah, H: FC-12
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 Shand, P: CD-05, DQ-10
 Shang, W: **FC-01**
 Shao, D: GF-07
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 Shapiro, D: CG-05
 Sharma, A: VP7-12
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 Sharma, A: EC-11
 Sharma, M: CR-11, FP-08
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 Shashank, U: AF-08
 Shearer, B: CG-05
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 Sheikh, S: AG-06, EF-06
 Shen, K: ED-10
 Shen, L: **FB-05**
 Shen, Z: GF-01, GF-02
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 Shick, A B.: **VP2-05**
 Shield, J: BG-06, DD-13, ER-01
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 Shiku, K: **BR-13**
 Shima, Y: **CR-01**
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 Shinwari, T: **VP2-08**, **VP7-13**
 Shiota, Y: ED-05
 Shirai, M: GG-03
 Shiraishi, M: DR-04, FR-01
 Shiraishi, T: AD-05
 Shotbolt, M: BB-03
 Shukla, A: EC-04
 Shukla, G K.: **AF-03**, FR-05
 Shukla, S: BD-06
 Si, P: ER-04
 Sierra, J F.: **EF-01**
 Silber, R: CC-02
 Silva, T: BC-09
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 Sim, M: **CG-06***
 Simalaotao, K: **EG-08**
 Simon, M: DG-13
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 Singh, A: GF-01, GF-02
 Singh, D K.: GR-08
 Singh, H: **VP7-09**
 Singh, P: DQ-01
 Singh, R: FE-03
 Singh, S: **VP6-01**
 Singh, S: **CE-09**, FE-02
- Singh, U: BE-03
 Sinova, J: EB-02
 Sivis, M: EA-05
 Sklenar, J: BP-09, DQ-05, FG-10, GE-04
 Skobjin, G: EB-02
 Skoric, L: DC-01
 Skorvanek, I: **BD-12**
 Skowronski, W: **BF-05**
 Slavin, A N.: DR-13
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 Slezak, T: AC-07, CE-03, FG-07
 Smejkal, L: EB-02
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 Smith, D A.: FD-01
 Smith, I M.: BG-05, ER-06
 Smith, S: GQ-01
 Snijder, S: CD-06
 Snowden, I: CD-08
 Snyder, J: **BG-07**
 Snyder, K: BG-05, ER-06
 Sobucki, K W.: **AR-07**
 Sofer, Z: GG-05
 Soh, Y: **EF-07**, **GC-09**
 Solognac, A: AD-09, CD-03, CD-04
 Somavarapu, S: **GD-03**
 Son, K: DR-03
 Song, M: FF-08, GG-11
 Song, Y: **BC-11**
 Song, Y: **BG-03**, **ER-04**
 Sonkusale, S: DE-05
 Sorée, B: BC-14
 Sorrentino, A: BC-12, DC-02, DC-04
 Sort, J: CD-01, CD-03
 Soss, S: BF-09
 Soumyanarayanan, A: AC-11, CG-06
 Sousa, D: BF-01
 Sousa, R: ED-02
 Spanopoulos, I: GR-10
 Spasojević, I: **CD-01**
 Spassov, S: FC-09
 Spencer, B: FQ-10
 Sprague, M: AG-03
 Srikanth, H: AP-04, AP-07, AR-08, CR-14, DC-10, FG-02, GD-08, GR-04, GR-11
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 Srivastava, A: AC-05
 Sršan, V: CH-07
 Stach, E A.: EF-06

- Stadler, B: BD-09, GQ-07
 Stamenov, P S.: **AG-05**
 Stamenova, M T.: AG-05
 Stanescu, S: DC-01
 Staruch, M: GQ-01
 Stenning, K D.: DB-01
 Stephen, G M.: FR-09
 Stevenson, P: **AD-08**
 Stiles, M: FF-03
 Stimpson, E: BP-09, FG-10
 Stoeffler, D: EC-11
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 Straßburger, J: BC-07
 Street, G T.: AF-06, **DF-07**
 Ström, P: DE-07
 Su, C: VP5-04
 Su, L: FD-07
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 Suarez-Blanco, P: BC-12
 Subedi, M M.: **GE-04**
 Subhani, N: DG-07
 Sud, A: DF-06
 Sudo, R: **AR-12**
 Sugimoto, S: **DF-10**, FR-06
 Suh, P: **BC-01**
 Sukegawa, H: CB-04, **XA-02**
 Sullivan, C: **GG-06**, GG-10
 Sultana, R: DB-01, **EE-02**
 Sultana, S: **BQ-03**
 Sumi, S: **DR-01**
 Sumiyoshiya, A: FR-05
 Sun, C: ED-04
 Sun, D: GR-12
 Sun, G: VP6-15
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 Sun, R: GR-12
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 Suto, H: CB-05
 Suwa, T: **AQ-02**
 Suwannaharn, N: CB-05
 Suzuki, H: VP2-03, VP2-04
 Suzuki, I: EG-05
 Suzuki, K: GG-03
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 Svec, P: BD-12
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 Swindells, C: **DD-07**, **FF-10**, **GE-01**
 Syed, M: **VP5-04**
 Syskaki, M: AD-09, CD-04
 Szilagyi, E O.: DD-01
 Szpytma, M: CE-03, FG-07
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- Tabata, H: FC-06
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 Tacchi, S: DB-02
 Takagi, S: **DF-03**
 Takahashi, R: **FC-06**
 Takahashi, Y K.: DF-10, EG-05, EG-06
 Takamura, Y: **CD-08**
 Takano, K: EQ-08
 Takashima, R: CH-04
 Takasu, T: DG-08
 Takeda, T: CF-11
 Takeo, K: FG-05
 Takeuchi, Y: **AQ-04**, AQ-07, **CQ-01**,
 CQ-08
 Takeuchi, Y: **BA-02**, GF-10
 Talapatra, A: **BF-09**
 Talatchian, P: **DA-05**, FF-04
 Talleb, H: AD-03
 Talmelli, G: BC-14, BF-06
 Tamaru, S: BA-04, CR-01
 Tan, H: CG-06
 Tan, L: **VP6-16**
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 Tanabe, K: DR-01
 Tanahashi, K: EG-03
 Tanaka, M: CF-11, DF-08, FE-10
 Tanaka, S: **BP-04-LB**
 Tandon, T: AG-06, EF-06
 Tang, J: GP-02-LB, GP-08-LB
 Tang, N: GE-06
 Tang, W: DD-08, **DD-14**
 Tanigawa, I: FP-10
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- Tashli, M: FC-10
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 Terry, K: VP7-03
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 Thareja, E: AC-03, AC-04, GF-03, GP-
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 Thibaudeau, P: **FQ-09**
 Thomas, A: EB-02
 Thomas, W C.: FD-01
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 Thomson, T: **FQ-10**
 Thota, S: VP7-09
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 Tiwari, A: CE-09
 Tiwari, B: EF-10
 Tiwari, S: VP6-21
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 Tkacik, S: **GF-03**
 To, D: **EP-08-LB**
 Tobise, M: CR-04
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 Toko, M: CH-04
 Tomar, M: DG-10
 Tomasello, R: DA-04
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 Töpfer, J: **BD-03**
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 Torres, J A.: DR-05, **ER-09**
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 Trampert, A: VP2-08, VP7-13
 Tran, T: CA-01
 Trapanese, M: **DG-09**, **FP-05**
 Tretiakov, O: FE-03

Trevillian, C: DR-13
 Tripathi, A: FR-08
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 Trouilloud, P L.: XA-03
 Tsai, F: BG-10
 Tsai, H: ED-11
 Tsai, L: AC-12
 Tsai, Y: **GC-03**
 Tsuchida, T: **VP7-05**
 Tsujikawa, M: GG-03
 Tsunoda, M: CR-10
 Tsymbol, E Y.: **BA-01**, CE-04, EF-10,
 GF-07, GP-04-LB
 Tucker, T D.: AG-06
 Tumbleson, Z: FB-05
 Turnbull, L: FP-07
 Turner, J J.: FB-05
 Tutt, F: CE-08
 Tyagi, P: CD-09
 Tyberkevych, V: DR-13

U

Uchimura, T: BA-02, GF-09
 Uchiyama, T: DG-06
 Udapudi, P J.: FC-10
 Uddin, M: BG-10
 Ueda, Y: **BQ-01**
 Ueno, T: AR-12
 Ukleev, V: VP2-08
 Umetsu, R: GR-06
 Upadhyay, C: DC-06
 Upadhyaya, P: FE-06, GP-04-LB

V

Vaczi, T: DD-01
 Valenzuela, S O.: EF-01
 van den Berg, A: DC-03
 van der Laan, G: CH-06, EF-11
 van Dijken, S: GD-06
 Van Houdt, J: GD-07
 Vanstone, A: DB-01
 Varma, Y: DD-14
 Varshney, K: AF-02
 Vas, J: FE-04
 Vasyuchka, V I.: EE-12
 Vattathurvalappil, S: CF-06
 Vecchiola, A: GD-01
 Vedmedenko, E Y.: **EC-14**
 Vega, M: AP-07, BR-07

Veiga, L: EF-11
 Veis, M: CC-02
 Vekhter, I: GP-01-LB
 Velez, M: **BC-12**
 Velic, A: EF-06
 Venkat, G: FF-10
 Venner, A: CD-05
 Vergnat, M: AA-01
 Verma, M: **CF-02**
 Vermeulen, B: **BC-14***, BF-06
 Viala, B: ED-02
 Victora, R H.: **CB-03**, EG-02, EG-07
 Vidamour, I T.: FF-10
 Vilas-Vilela, J: DG-12
 Villar, A: FG-13
 Vitali, M: DB-02
 Vitor de Faria, P: BE-08
 Vitos, L: CR-02
 Vodungbo, B: **EA-03**
 von Freymann, G: EE-12
 Vourna, X: AQ-09
 Vu, D: GF-06

W

Wachs, R: CR-05
 Wada, K: EQ-08
 Wade, J: ER-14-LB
 Wadley, P: CG-02, CG-11, **EB-01**
 Wadumesthri, Y: CR-13, DC-10, **FG-02**,
 FR-10
 Wagatsuma, H: DG-01
 Wakabayashi, K: CR-03
 Wakabayashi, Y K.: DF-08
 Wallace, P: DG-05
 Walters, A: FP-07
 Wan, L: AF-05, GP-04-LB
 Wan, Z: VP4-12
 Wang, C: **FF-07**
 Wang, C: AQ-08
 Wang, H: **GB-02**
 Wang, H: GD-04
 Wang, H: BQ-05
 Wang, J: VP4-03
 Wang, J: EF-10
 Wang, J: AA-01, AD-04, AR-03, BD-07,
BF-01, BR-11, CD-10, DR-02, ER-10,
 FR-04, GR-09
 Wang, J: FD-07
 Wang, J: DD-14

Wang, J: **VP6-06**, VP6-09
 Wang, P: AC-05, AE-02, GQ-08
 Wang, Q: BQ-05
 Wang, Q: AB-03
 Wang, S X.: DG-05
 Wang, Y: BQ-09
 Wang, Y: EF-05
 Wang, Y: VP4-08
 Wang, Y: CD-09
 Wang, Y: GF-01, **GF-02**
 Wang, Y: DR-08
 Wang, Z: GC-08
 Wang, Z: VP3-01
 Wang, Z: GC-08
 Wang, Z: **VP4-15**
 Waring, H J.: FQ-10
 Watanabe, K: FE-01
 Watanabe, K: **DR-06**
 Watt, J: EF-10
 Webb, C M.: **EC-01**
 Weber, J T.: GE-10
 Weck, P F.: BD-07
 Wei, G: BD-08
 Wei, M: CC-05
 Wei, Y: VP4-04
 Weigand, M: FD-08
 Weiler, M: EE-12
 Weir, V J.: AP-05
 Welp, U: DE-06, EE-04
 Wenliang, Z: GC-09
 Whittier, E: **FC-02**
 Wilgocka-Slezak, D: CE-03
 Will-Cole, A R.: **DE-04**
 William, M M.: AP-05
 Winkler, R: **ED-13**
 Wintz, S: BP-03, FD-08
 Wissler, J J.: DD-07, FD-06, GE-01
 Witanachchi, S: CR-14, DQ-06, GR-11
 Withrington, J: DG-01
 Wöckinger, D: BR-09, BR-10
 Wohlath, V: CC-04
 Wojnar, T: AE-05
 Wolf, B: ER-10, GR-09
 Wolf, M: GG-13
 Woltersdorf, G: GG-13
 Woo, D: AF-04, GP-09-LB
 Wood, G: EF-11
 Worledge, D: XA-03
 Wrona, J: BF-05, CD-04

Wu, A: **FD-07**
 Wu, J: GP-10-LB, **GR-12**
 Wu, K: AQ-05, AQ-06, **AR-05**, CF-07, CQ-06, **CQ-07**, FC-05
 Wu, L: **VP4-09**, VP6-10
 Wu, Q: CR-06
 Wu, S: FB-03
 Wu, S: ED-10
 Wu, S: FD-01
 Wu, X: AQ-05, CF-07
 Wu, Y: **TU-01**
 Wu, Y: GG-13

X

Xiao, F: AQ-08
 Xie, B: AC-11
 Xie, H: **VP4-03**
 Xie, Z: VP6-20
 Xiong, J: AE-05
 Xiong, Y: GE-04, GP-10-LB
 Xu, B: AA-01
 Xu, D: BQ-04, FP-04, VP4-06
 Xu, K: EF-01
 Xu, Y: **VP5-05**
 Xue, F: **DF-04**, EF-09

Y

Yabukami, S: AP-01, AP-02, **AP-03**, CQ-05, **FC-08**
 Yabushita, K: VP7-05
 Yadav, P: **GR-02**
 Yadav, S: **FR-06**
 Yahagi, Y: ED-05
 Yakushiji, K: BA-04
 Yamada, H: FC-06
 Yamada, T: CQ-01
 Yamaguchi, T: EQ-08
 Yamaguchi, W: BG-12
 Yamahara, H: FC-06
 Yamamoto, H: DF-08
 Yamamoto, H: BD-01
 Yamamoto, M: FR-01
 Yamamoto, S: BD-01
 Yamamoto, T: BA-04
 Yamane, I: DG-01
 Yamane, Y: BA-02, GF-10
 Yamanoi, K: DF-03
 Yamanouchi, M: DF-08
 Yamashita, S: AR-12

Yamauchi, T: GR-06
 Yamazaki, A: CQ-05
 Yamazaki, T: CR-01
 Yanagihara, H: **FG-05**
 Yang, B: GP-10-LB
 Yang, B: VP6-08
 Yang, B: BP-02, EE-07
 Yang, F: **CE-07**, GP-08-LB
 Yang, F: AQ-08
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 Yang, J: FC-06
 Yang, J: **VP3-01**
 Yang, J: FE-04
 Yang, L: GD-04
 Yang, M: BC-13, ED-10
 Yang, S: **AG-04**
 Yang, W: GC-08
 Yang, Y: AD-04, BF-01, CD-10, FR-04
 Yang, Z: **VP1-03**
 Yang, Z: DG-03
 Yao, W: DG-07
 Yapaskurt, V: AE-12
 Yazdi, S: CG-05
 Ye, Z: **VP4-08**
 Yemeli, I N.: CH-08
 Yenugonda, V: DQ-02, DQ-03
 Yin, G: BG-01, DC-02, DC-04
 Yin, H: **FG-01**
 Yin, Z: **AC-05***
 Yokoi, K: DG-01
 Yokota, N: **AA-05**
 Yonaga, A: ER-05
 Yoo, J: FG-08
 Yoo, M: DF-09, FQ-02
 Yoon, J: BA-02
 Yoon, S: AF-04, **GP-09-LB**
 Yoon, S: **VP6-17**
 Yoshida, Y: DF-06
 Yoshimoto, T: CR-08
 Yousuf, S: GR-01
 Yu, C: CB-02
 Yu, G: BF-01
 Yu, W: AP-09-LB
 Yu, X: AG-04
 Yuan, J: AQ-08, **BQ-05**, BQ-07, BQ-09, BQ-10, **CR-06**
 Yuan, L: GP-04-LB
 Yuan, Z: **FD-05**

Yue, S: VP4-12
 Yunker, B: CF-07
 Yutaka, H: BR-08

Z

Zajac, M: FG-07
 Zaka, A: BF-09
 Zakharov, A: CG-11
 Zalewski, T: **CH-01**
 Zappala, E: CE-08
 Zarzuela, R: GE-11
 Zayko, S: EA-05
 Zázvorka, J: GF-04
 Zeng, H: AE-05
 Zeng, L: VP1-02, VP6-06, VP6-07, VP6-08, VP6-09, VP6-11, VP6-12, VP6-20
 Zeng, W: AC-09
 Zeng, X: VP5-05
 Zhang, B: BG-03, ER-04
 Zhang, C: VP4-15, VP4-17, **VP4-18**, **VP6-15**
 Zhang, C: **DR-08**
 Zhang, D: **AQ-08**, **BQ-07**
 Zhang, D: CD-10
 Zhang, D: VP3-01
 Zhang, E: BB-03
 Zhang, E: BP-02, **EE-07**
 Zhang, H: VP4-18
 Zhang, H: BG-01
 Zhang, M: VP3-03
 Zhang, N: VP6-12
 Zhang, R: **ED-06**
 Zhang, S: EC-08
 Zhang, S: VP6-07
 Zhang, S: EC-01
 Zhang, T: **VP4-02**
 Zhang, W: BQ-07
 Zhang, W: GE-04, GP-10-LB, GR-12
 Zhang, X: GP-06-LB
 Zhang, X: GD-04
 Zhang, X: **AA-02**
 Zhang, X: ER-12
 Zhang, Y: CE-08
 Zhang, Y: VP4-02, VP4-03
 Zhang, Y: GP-06-LB
 Zhang, Z: FD-07, **GR-05**
 Zhang, Z: **GQ-05**
 Zhang, Z: FD-07
 Zhao, J: FD-01

Zhao, M: **FD-08**
 Zhao, S: **VP4-17**
 Zhao, T: VP7-03
 Zheng, K: VP4-02
 Zheng, S: **EG-01**
 Zheng, T: **BP-02**, EE-07
 Zheng, X: BG-03, ER-04
 Zheng, Y: AD-03
 Zhou, B: **AB-01**
 Zhou, E T.: GE-04
 Zhou, H: AQ-08, BQ-05, BQ-07, BQ-09,
 BQ-10, CR-06
 Zhou, J: **AC-11**, **FF-01**
 Zhou, J: GB-02
 Zhou, S: **GP-10-LB**, GR-12
 Zhou, W: FD-08
 Zhou, Y: **AD-06**
 Zhou, Z: GC-08
 Zhou Hagström, N: BC-09
 Zhu, E: BB-03
 Zhu, J: BP-02, EE-07, EG-04, FF-05
 Zhu, T: FC-04, FP-01
 Zhu, Y: **CG-07**
 Zhu, Y: DG-07
 Zhuang, Y: VP4-02
 Zhukovskyi, M: CE-05
 Zink, B L.: **GF-08**
 Zink, B: AD-04, BF-01, CD-10
 Zolla, H G.: **CB-02**
 Zolnai, Z: DD-01
 Zülicke, U: ED-13
 Zuo, H: AR-05
 Zuo, J: VP3-03
 Zuo, J: EE-04, GQ-05
 Zuo, L: VP3-06
 Zutic, I: AA-01, AE-05
 Zuzek Rozman, K: CH-07
 Zygidis, T: DG-11