

TECHNICAL PROGRAM

Nov. 29 (Sun.)

Tutorial Seminar

14:00 - 15:30 Tutorial-1

Perpendicular magnetic anisotropy: from ultralow power spintronics to cancer therapy
Russell Cowburn (University of Cambridge)

15:30 - 15:45 Coffee Break

15:45 - 17:15 Tutorial-2

A couple of advanced X-ray methods for magnetics and optics
Eiichiro Matsubara (Kyoto University)

17:15 - 18:45 Get Together

Nov. 30 (Mon.)

8:50 - 9:00 Opening remarks
Prof. Mitsuteru Inoue

Mo-01 Energy Assisted Recording

9:00 - 9:30 Mo-01-01

Technologies for three-dimensional magnetic recording
Hirofumi Suto (Toshiba Corporation)

9:30 - 10:00 Mo-01-02

Thermal design of L1₀ FePt based recording media for heat assisted magnetic recording (HAMR) application
JiangFeng Hu (Data Storage Institute)

10:00 - 10:30 Mo-01-03

HAMR light delivery: process and integration challenges in a production environment
John L. Ibele (Seagate Technology)

10:30 - 10:45 Mo-01-04
Fabrication and characterization of the aperture antenna with V-groove structures to generate nanosized circularly polarized light
Yongfu Cai (Nagaoka University of Technology)

10:45 - 11:00 Coffee Break

Mo-02 Magneto-Optical Device

11:00 – 11:30 Mo-02-01
Integrated magnetoplasmonic nanostructures for non reciprocal optical devices
Vy Yam (Univ Paris-Sud)

11:30 -11:45 Mo-02-02
Magneto-optical spectroscopy of inhomogeneous magnetic materials: nanocomposites
Alexander B. Granovski (Lomonosov Moscow State University)

11:45 – 12:00 Mo-02-03
Properties and linear birefringences of InGaAs/GaAsP semiconductor spin-vecels: from experiments to theory and models
Tibor Fordos (Ecole Polytechnique Palaiseau-France, VŠB-Technical Univ. of Ostrava)

12:00 - 12:15 Photograph

12:15 - 13:15 Lunch

Mo-P Short Presentation & Poster Session

13:15 - 13:59 Short presentation

13:59 - 15:45 Poster session

Mo-P-01 Switching of the optically pumped magnetostatic spin waves in iron garnet disks
Mikhail A. Kozhaev (Russian Quantum Center)

Mo-P-02 Laser-induced antiferromagnetic-paramagnetic transition in a complex multi-sublattice CuB_2O_4
Takuya Satoh (Kyushu University)

Mo-P-03 Ultrafast Demagnetization in $\text{Gd}_{23}\text{Fe}_{77-x}\text{Co}_x$
Souliman El Moussaoui (Nihon University)

- Mo-P-04 The magnetic layer thickness dependency of all-optical magnetization switching in GdFeCo thin films
Hiroki Yoshikawa (Nihon University)
- Mo-P-05 Gilbert damping constant of TbFe / GdFeCo bilayers with various layer stacks
Tomohiro Higashide (Nagoya University)
- Mo-P-06 Large thickness dependency of static and dynamic magnetic properties in ferromagnetic GdFeCo thin films
Ryohei Ueda (Nihon University)
- Mo-P-07 Magneto optic three dimensional display with magneto photonic crystals
Hiroyuki Takagi (Toyohashi University of Technology)
- Mo-P-08 Magneto-optical investigations of low-dimensional thin-film Co/Bi/Co systems
Elena Evgen'evna Shalygina (Lomonosov Moscow State University)
- Mo-P-09 Magnetic characteristics of $Y_{1.5}Bi_1R_{0.5}Fe_4Ga_1O_{12}$ (R = Dy, Eu) films fabricated on glass substrates by metal organic decomposition method
Hina Saito (Nihon University)
- Mo-P-10 Transversal Kerr effect of $In_{1-x}Mn_xAs$ layers prepared by ion implantation followed by pulsed laser annealing
Elena Alexandrovna Ganshina (Lomonosov Moscow State University)
- Mo-P-11 Effect of yttrium substitution to Fe_3O_4 plated films on their optical absorption and magneto-optical response
Shinichiro Mito (National Institute of Technology, Tokyo College)
- Mo-P-12 Evaluation of optical coupling between magnetic layers and optical waveguides for polarization modulators
Kazuhiro Nishibayashi (Tokyo Institute of Technology)
- Mo-P-13 Analysis of strain in highly Bi-substituted neodymium iron gallium garnet thin films on GGG by MOD method
Michimasa Sasaki (Nagaoka University of Technology)
- Mo-P-14 Magnetic domain observation system with determination of the three-dimensional local magnetization direction
Sakae Meguro (NEOARK Corporation)
- Mo-P-15 Optical and magneto – optical responses on plasmonic composite structures with squarely arranged gold particles and magnetic garnet
Hironaga Uchida (Tohoku Institute of Technology)

- Mo-P-16 Numerical analysis of the structure to reduce loss of optical waveguide circulator using the two-dimensional magnetophotonic crystal
Kazuo Yayoi (National Institute of Technology, Ibaraki College)
- Mo-P-17 Magnetophotonic crystals with multi-localization states for quantitative evaluation of defect depth in non-destructive testing
Ryosuke Hashimoto (Toyohashi University of Technology)
- Mo-P-18 Design of magnetophotonic crystal with heat-diffusive layers for well-defined magnetic fringe formation
Ryosuke Isogai (Toyohashi University of Technology)
- Mo-P-19 Circularity control of localized light by plasmonic antennas with fabrication margin
Shinichiro Ohnuki (Nihon University)
- Mo-P-20 High quality cerium yttrium iron garnet thin films for infrared magneto-optical applications
Lukas Beran (Charles University of Prague)
- Mo-P-21 Demonstration of Q-switch laser using magneto-optical garnet
Taichi Goto (Toyohashi University of Technology)
- Mo-P-22 Ethylene gas sensing and optical properties of SnO₂ nanowires synthesized via CVD method
Maisara A. M. Akhir (Universiti Sains Malaysia)

15:45 - 16:00 Coffee Break

Mo-03 Advanced Measurement Technique

- 16:00 – 16:30 Mo-03-01
Current progress in nanometric magnetic moment measurements based on electron magnetic circular dichroism
Shunsuke Muto (Nagoya University)
- 16:30 -17:00 Mo-03-02
Ultrafast spin dynamics observed by pump-probe X-ray holography
Stefan Eisebitt (Technische Universität Berlin)
- 17:00 – 17:30 Mo-03-03
Probing ultrafast magnetization dynamics with resonant X-ray scattering techniques
Jan Luning (Sorbonne University Paris)

17:30 – 18:00 Mo-03-04

Exploring all-optical magnetic switching with resonant X-rays
Alexander H Reid (SLAC National Accelerator Laboratory)

Dec. 1 (Tue.)

Tu-P Short Presentation & Poster Session

9:00 - 9:46 Short presentation

9:46 - 11:30 Poster session

Tu-P-01 Effect of hotspot position fluctuation to writing capability in heated dot magnetic recording
Warunee Tipcharoen (College of Data Storage, KMITL)

Tu-P-02 Variation of effective damping factor for CoPt-based alloy films with various atomic stacking structures
Shintaro Hinata (Tohoku University)

Tu-P-03 High coercivity CoPt-oxide granular films with low melting point oxide
Kim Kong Tham (Tanaka Kikinzoku Kogyo K. K.)

Tu-P-04 Metallic layer / SiO_x interface dependency of isolated FeCuPt grains shapes, magnetic properties and crystal structures
Ren Kobayashi (Nihon University)

Tu-P-05 Size dependence of switching behavior in single epitaxial Co/Pt multilayer dots
Bin Lao (Tohoku University)

Tu-P-06 Structural and magnetic transitions of CrPt₃ films by heat treatment and ion irradiation
Kengo Fukuta (Nagoya University)

Tu-P-07 Magnetization behavior of L1₀-FePt alloy thin films prepared on single crystalline substrates
Hiroki Iwama (Tohoku Gakuin University)

Tu-P-08 Annealing stability in MgO/CoFeB/Ta/[Co/Pd]_n composite structures
Valentin Garcia-Vazquez (Benemerita Universidad Autonoma de Puebla)

Tu-P-09 Fabrication of Nd-Fe-B circular dot arrays and their structure and magnetic properties
Aya Sugawara (Tohoku Gakuin University)

Tu-P-10 Effect of buffer layers on the magnetic properties for Mn-Al thin films
Naoya Kumagai (Tohoku Gakuin University)

- Tu-P-11 Observation of hyperfine structure of $\text{DO}_{22}\text{-Mn}_{3-x}\text{Fe}_x\text{Ga}$ by Mossbauer effect
Akira Koeba (Tohoku Gakuin University)
- Tu-P-12 Composition dependent isolated FeXPt_{100-X} grains fabricated by rapid thermal annealing
Masayuki Imazato (Nihon Univesity)
- Tu-P-13 Domain wall dynamics in Y-shaped permalloy nanowires
Jong-Ching Wu (National Changhua University of Education)
- Tu-P-14 Wavenumber dependence of surface plasmon polariton on layer structure using Au / YIG plasmon waveguide
Takuya Matsumoto (Nihon University)
- Tu-P-15 Magneto-optical properties of magnetoelectric iron-based oxide films prepared by sol-gel synthesis
Kazuhiro Yamaguchi (Toyohashi University of Technology)
- Tu-P-16 Pr-Fe-B + α -Fe nano-composite film magnets prepared by PLD method
Masaki Nakano (Nagasaki University)
- Tu-P-17 Temperature and current-induced phase transition of $[(\text{GeTe})_2/(\text{Sb}_2\text{Te}_3)_1]_n$ topological superlattices
Bang Do (Toyota Technological Institute)
- Tu-P-18 Optical and magneto-optical properties of Bi substituted Nd iron garnets prepared by metal organic decomposition method
Eva Jesenska (Nagaoka University of Technology)
- Tu-P-19 Current induced domain-wall motion in magnetic wire sputtered under different condition of the gas
Akihiro Sibata (Toyota technological institute)
- Tu-P-20 Current induced domain wall motion attributed to spin Hall effect and Dzyaloshinsky-Moriya interaction in Pt/GdFeCo(100nm) magnetic wire
Yuichiro Kurokawa (Toyota Technological Institute)
- Tu-P-21 Micromagnetic study of spin-torque nano-oscillators dipolar-coupled with a perpendicular magnetized layer
Te-ho Wu (Natl. Yunlin Univ. of Science and Technology)
- Tu-P-22 Numerical analysis on magnetic vortex motion
Xiaorui Ya (Kyushu University)
- Tu-P-23 Anomalous tunnel magnetoresistance and spin transfer torque in magnetic tunnel junctions with embedded nanoparticles
Te-ho Wu (Natl. Yunlin Univ. of Science and Technology)

11:30 - 12:45 Lunch

Tu-01 New Materials / Devices I

12:45 - 13:15 Tu-01-01

Magneto-optic imaging of room temperature magnetic skyrmion bubbles
Axel Hoffmann (Argonne National Laboratory)

13:15 - 13:45 Tu-01-02

Electric field control of magnetic moment in palladium
Tomohiro Koyama (The University of Tokyo)

13:45 - 14:15 Tu-01-03

Field, current and temperature induced domain walls dynamics: focus on ferrimagnets
Alexandra Mougin (Laboratoire de Physique des Solides)

14:15 - 14:30 Coffee Break

Tu-02 New Materials / Devices II

14:30 - 15:00 Tu-02-01

Non-volatile magnetic logic devices
Lew Wen Siang (Nanyang Technological University)

15:00 - 15:30 Tu-02-02

Origin of ferromagnetism in functional topological insulators and semi-metals
Tomasz Dietl (Polish Academy of Sciences)

15:30 - 15:45 Tu-02-03

Magnetic activity of surface plasmon resonance using dielectric magnetic materials fabricated on quartz glass substrate
Kazuki Narushima (Nihon University)

15:45 - 16:00 Coffee Break

Tu-03 Magnonics

16:00 - 16:30 Tu-03-01

Magnon transistor for all-magnon data processing
Alexander A. Serga (Technische Universität Kaiserslautern)

- 16:30 - 17:00 Tu-03-02
Propagation, steering and detection of spin waves for magnonic applications
Helmut Schultheiss (Helmholtz-Zentrum Dresden-Rossendorf)
- 17:00 - 17:30 Tu-03-03
Microwave properties of reconfigurable 2-D magnonic crystal
Arabinda Haldar (National University of Singapore)
- 17:30 - 17:45 Tu-03-04
Unidirectional control of spin wave generated by light pulses using interference
Isao Yoshimine (The University of Tokyo)
- 17:45 - 18:15 Award Ceremony
- 19:30 - 21:30 Banquet (Evergreen Laurel Hotel Penang)

Dec. 2 (Wed.)

We-01 Thermo-magnetic Phenomena

- 9:00 - 9:30 We-01-01
Theory of spin Seebeck effect in magnetic multilayers
Hiroto Adachi (Japan Atomic Energy Agency)
- 9:30 - 10:00 We-01-02
How magnonic spin currents move domain walls
Ulrich Nowak (University of Konstanz)
- 10:00 - 10:30 We-01-03
Heat conduction analysis from first principles
Takuma Shiga (The University of Tokyo)
- 10:30 - 10:45 Coffee Break

We-02 Nano Magnetic Materials

- 10:45 - 11:15 We-02-01
New insights into the origin of magnetic anisotropy and damping by use of broadband ferromagnetic resonance spectroscopy
Justin M Shaw (NIST)
- 11:15 - 11:45 We-02-02
Nanoscale manipulation of magnetic properties through local nanostructural features and proximity effects: the model cases of Fe nanoparticles and exchange biased Ni/FeF₂ nanostructures
Arantxa Fraile Rodriguez (Universitat de Barcelona)
- 11:45 - 12:00 We-02-03
Novel materials by atomic engineering of magnetic moments
Andrei Kirilyuk (Radboud University)
- 12:00 - 13:15 Lunch

We-03 Spin Dynamics

- 13:15 - 13:45 We-03-01
All-optical helicity-dependent switching in magnetic nano-structures and devices
Charles-Henri A Lambert (Institut Jean Lamour)
- 13:45 - 14:15 We-03-02
Ultrafast spin injection in semiconductors
Marco Battiato (Vienna University of Technology)
- 14:15 - 14:45 We-03-03
Magnetization dynamics of itinerant and localized electrons in gadolinium metal
Bjorn Frietsch (Free University Berlin)
- 14:45 - 15:00 Closing Remarks
Prof. Takayuki Ishibashi