

Magnonics 2023 Workshop

July 30th - August 3rd

Le Touquet - Paris - Plage, France



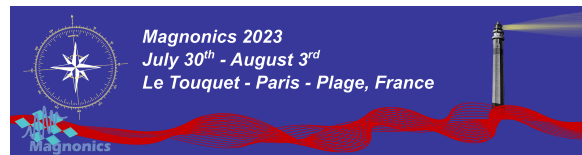
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Organizing committee

- Ursula Ebels,
Spintec,
Univ. Grenoble Alpes, CEA-Grenoble, CNRS, Grenoble INP, 38054 Grenoble, France
- Madjid Anane,
Unité Mixte de Physique CNRS, Thales,
Univ. Paris-Saclay, 91767 Palaiseau, France
- Matthieu Bailleul,
Institut de Physique et Chimie des Matériaux de Strasbourg,
Univ. de Strasbourg, CNRS, 67034 Strasbourg, France
- Grégoire de Loubens,
Service de Physique de l'État Condensé,
CEA-Paris-Saclay, CNRS, Univ. Paris-Saclay, 91191 Gif-sur-Yvette, France
- Olivier Klein,
Spintec,
Univ. Grenoble Alpes, CEA-Grenoble, CNRS, Grenoble INP, 38054 Grenoble, France

Scientific committee

- Andrei Chumak (U. of Wien)
- Sergej Demokritov (U. of Münster)
- Benedetta Flebus (Boston College)
- Olena Gomonay (JGU Mainz)
- Dirk Grundler (EPF Lausanne)
- Ilya Krivorotov (U.C. Irvine)
- YoshiChika Otani (U. of Tokyo)
- Philipp Pirro (T.U. Kaiserslautern)
- Caroline Ross (MIT)
- Katrin Schultheiß (HZDR Dresden)
- Tatiana Rappoport (U. Rio de Janeiro)
- Silvia Tacchi (IOM Perugia)

Sponsors:



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Welcome Address

On behalf of the organizing committee, it is our great pleasure to welcome you to Magnonics 2023, the 8th edition of this workshop dedicated to the fundamentals and applications of magnons. This year's conference will be held in the beautiful coastal town of Le Touquet - Paris - Plage, from Sunday, July 30th to Thursday, August 3rd, 2023.

We look forward to welcoming you as a participant, as leading experts, researchers and innovators from around the world to exchange knowledge, share insights and explore the latest advances in the field of Magnonics. The conference promises to be a stimulating and enriching experience, providing a platform for fruitful discussions and forging collaborations.

The conference program has been carefully crafted by the Scientific Committee to cover a wide range of topics encompassing various aspects of Magnonics and its recent novel research directions, ensuring a comprehensive exploration of the field. Some of the key areas of focus include

- Magnetization dynamics and damping (linear, nonlinear, propagating spin-waves driven by spin torque, spin orbit torque, spin currents, gradients, VCMA, and others).
- Magnonics in/of spin textures, of anti-ferromagnets, of 2D materials.
- Magnonic crystals, materials and heterostructures.
- Magnonic devices, including microwave and terahertz devices.
- Hybrid magnonic, including quantum, optical, phonon, and plasmon.
- Magnonics for logic and computing applications.
- Novel techniques for spin wave generation, detection, and control, including new microscopy and spectroscopy techniques.

To this end, we have selected a diverse line-up of speakers who will present their latest research, and hopefully stimulate discussions to identify fruitful future directions. In addition, we have allocated ample time for poster sessions to allow a large number of attendees to showcase their work and receive valuable feedback from the community.

To symbolize our commitment to illuminate future research directions in the field of Magnonics, we have chosen the lighthouse of La Canche as the guiding symbol for this 2023 edition. Lighthouses, with their towering structures perched on

coastal landscapes, have served as beacons of light, guiding ships safely through treacherous waters and signaling the way to new horizons. Metaphorically, they represent the pursuit of knowledge and the quest for discovery. They also serve as a reminder that we are on a journey together, exploring uncharted territory and pushing the boundaries of magnonic research.

In addition to intellectual stimulation, we hope you will take time to enjoy the picturesque setting of Le Touquet - Paris - Plage. The coastal charm combined with the vibrant atmosphere offers a unique blend of relaxation and cultural exploration. As a special highlight, we have organized a social event at Nausicaá the largest aquarium in Europe (www.nausicaa.fr/en). This will be followed by a social dinner within the ocean conservatory, where we will be surrounded by beautiful and exotic fish and other animals of the ocean. We hope that these networking opportunities will foster interaction among participants and create a memorable experience for all involved.

To ensure your successful attendance, please review the attached conference program, which includes details of your presentation schedule, poster session, and other relevant information. Should you have any specific needs or questions, please do not hesitate to contact our organizing committee. We are here to assist you in any way we can.

Once again, we would like to express our sincere appreciation for your participation in Magnonics 2023. Your expertise and contributions will undoubtedly enrich the conference, and we look forward to meeting you in person. Together, let us explore new frontiers in Magnonics and forge lasting connections within this vibrant community.

Ursula Ebels, Madjid Anane, Grégoire de Loubens, Matthieu Bailleul, and Olivier Klein

History

Le Touquet-Paris-Plage, often referred to simply as Le Touquet, is a coastal town in northern France with a rich history and has been associated with several prominent figures.

Early development: Le Touquet-Paris-Plage was originally a small fishing village on the Opal Coast. In the late 19th century, it caught the attention of two entrepreneurs, Alphonse Daloz and Hippolyte de Villemessant. They envisioned transforming the area into an elegant seaside resort to attract wealthy tourists. With the help of the famous architect Louis Quételart, they developed a master plan for the town.

Le Touquet was officially founded in 1882, when the first casino and luxury hotel, the Hotel des Anglais, were built. The town grew rapidly and became popular with Europe's elite, being a preferred destination for leisure and relaxation. The SNCF poster on the front page is a reminder of this noble heritage, summed up by the reference to "Arcachon du Nord".

Le Touquet continued to flourish at the beginning of the 20th century. It attracted wealthy visitors, including artists, writers and celebrities (amongst others Edouard Leveque, who gave the name to the Opal coast because of its specific light). The town's infrastructure expanded with the construction of golf courses, tennis courts, equestrian facilities and a racetrack. Le Touquet's history as a prestigious resort town has contributed to its reputation and cultural significance. Today, it continues to attract visitors seeking its beautiful beaches, charming architecture and rich heritage.

On a more anecdotal note with national resonance, Emmanuel Macron, the current President of France, has a personal connection to Le Touquet. He has spent several family vacations in the town since his childhood. Macron's parents owned a vacation home in Le Touquet and he has fond memories of the place.

Some of you may also want to visit the La Canche lighthouse, which provides a fitting backdrop for the Magnonics 2023 conference. Built in 1949, the La Canche Lighthouse has stood the test of time and proudly stands as a testament to the region's maritime heritage.

Access

You may find below some practical information to reach the resort.

By plane

The nearest international airports to Le Touquet-Paris-Plage are:

- London Heathrow Airport. From Heathrow, you have a few options. You can take a direct flight from Heathrow to Lille Airport (Lille-Lesquin) in France, which is the closest major airport to Le Touquet. From Lille, you can proceed to Le Touquet by train or taxi. Alternatively, you can take a train or taxi from Heathrow to London St Pancras International station and then take the Eurostar train to Lille, followed by a train or taxi to Le Touquet.
- Lille Airport (Aéroport de Lille-Lesquin) - Located approximately 130 kilometers (81 miles) northeast of Le Touquet, Lille Airport offers both domestic and international flights. It serves various destinations in Europe and beyond.
- Brussels Airport (Brussels-Zaventem Airport) - Situated around 180 kilometers (112 miles) northeast of Le Touquet, Brussels Airport is the main international airport in Belgium. It offers a wide range of domestic and international flights to numerous destinations worldwide.
- Paris Charles de Gaulle Airport (Aéroport Paris-Charles de Gaulle) - Although it is not as close as the previous two airports, Paris Charles de Gaulle Airport is a major international hub with numerous flight connections. It is located approximately 250 kilometers (155 miles) south of Le Touquet and is accessible via various transportation options (see below).

While these airports are the nearest international options, it's worth noting that Le Touquet also has its own small airport, Le Touquet-Côte d'Opale Airport (Aéroport Le Touquet-Côte d'Opale). However, this airport primarily handles general aviation and private flights rather than commercial international flights.

By train

To reach Le Touquet-Paris-Plage from Paris by train, you can follow these steps:

Start by making your way to Gare du Nord station in Paris, which has regular train services to Le Touquet-Paris-Plage. Once you're at the train station, locate the

ticket counters or self-service ticket machines. If you prefer, you can also book your tickets online in advance through the official website of the French national railway company, SNCF (www.sncf.com) or through other reliable ticketing platforms.

Purchase a ticket to Etaples-Le Touquet station, which is the closest train station to Le Touquet-Paris-Plage. Trains from Paris to Etaples-Le Touquet are usually direct, but it's always a good idea to check the train schedule for any connections or changes.

Board the train bound for Etaples-Le Touquet and enjoy the approximately 2.5-hour journey from Paris. The trains are comfortable and offer amenities like restrooms and sometimes food and beverage services.

Once you arrive at Etaples-Le Touquet station, you'll need to take a short onward journey to reach Le Touquet-Paris-Plage itself. You can either take a taxi or use public transportation options like buses or local shuttles to reach your final destination.

It's always advisable to check the train schedules and ticket availability in advance to ensure a smooth journey. The SNCF website or mobile app will provide up-to-date information regarding train times, ticket prices, and any possible changes.

Shuttle service

The workshop will run a shuttle service on Sunday and Thursday between Le Grand Hotel du Touquet and the Etaples train station. Departures of the bus from Etaples to the Grand Hotel will be synchronized with train schedule from Paris with estimated departure time at 16:00, 16:45, 17:50, and 20:15.

Please note that alternative transportation options, such as taxis, may be scarce. For those who prefer walking, it is approximately a 5 km journey. Additionally, participants can contact the Hotel or send an email to the organizers to arrange for pick-up from the train station.

Regular bus

There is bus service available to reach Le Grand Hotel du Touquet from Etaples train station. The bus network serving the Le Touquet-Paris-Plage area is operated by a company called "Les Mouettes" (Compagnie des Autobus des Mers).

From Etaples train station, you can take Bus Line 510 to reach Le Touquet-Paris-Plage. This bus line connects Etaples to Le Touquet and operates on a regular schedule. The bus stop closest to Le Grand Hotel du Touquet is usually "Le Touquet - Place de l'Hermitage" or "Le Touquet - Aéroport." You can check the exact bus stops and schedules on the Les Mouettes website or by contacting their customer service.

It's worth noting that bus schedules may vary depending on the day of the week and the time of year, so it's advisable to check the latest schedules to plan your journey accordingly.

Taxi

Enclosed is a list of Taxis that operate in Le Touquet

- CRETON : 06 09 38 45 75
- JONATHAN : 06 80 70 98 62
- BENJAMIN : 06 08 01 57 09
- DRIVE ME : 06 07 60 01 74
- SEB TAXI : 06 61 70 86 25
- ALEXIS : 06 80 06 10 32
- OPALE : 06 07 10 13 57

Useful information

Tourism Office

Office de tourisme du Touquet-Paris-Plage en Côte d'Opale
Jardin des Arts Avenue du Verger
62520 Le Touquet-Paris-Plage office-tourisme@letouquet.com
Tél: +33 3 21 06 72 00

Hotel Information:

We have arranged it so that all of the scientific and social events will be in one place.

ADDRESS OF THE GRAND HOTEL:

4 Bd de la Canche,
62520 Le Touquet-Paris-Plage, France
Tél: ++33 (0)3 21 06 88 88
<https://legrandhotel-letouquet.com/>

- Breakfast: The breakfast service at the Grand Hotel will be available from 6:30 to 10:30.
- Lunch and Dinner: Details regarding lunch and dinner arrangements will be provided closer to the conference date.
- Cocktails: Information about the cocktails timing and location will be announced during the conference.
- Conference Room and Posters: The specific location of the conference room and poster presentations will be indicated at the venue.
- Swimming Pool and Spa: The Grand Hotel offers free access for participants to its swimming pool and spa facilities. Special treatments can be booked at your own costs.
- Other Attractions: Participants can also take advantage of other amenities such as mini-tennis and video games at the Grand Hotel.
- Bar: please note that the bar service at the Grand Hotel is not included in the conference package. Any drinks consumed at the bar will be at your own expense and will be paid for directly at the bar (no charging to the room is possible).

Social Events:

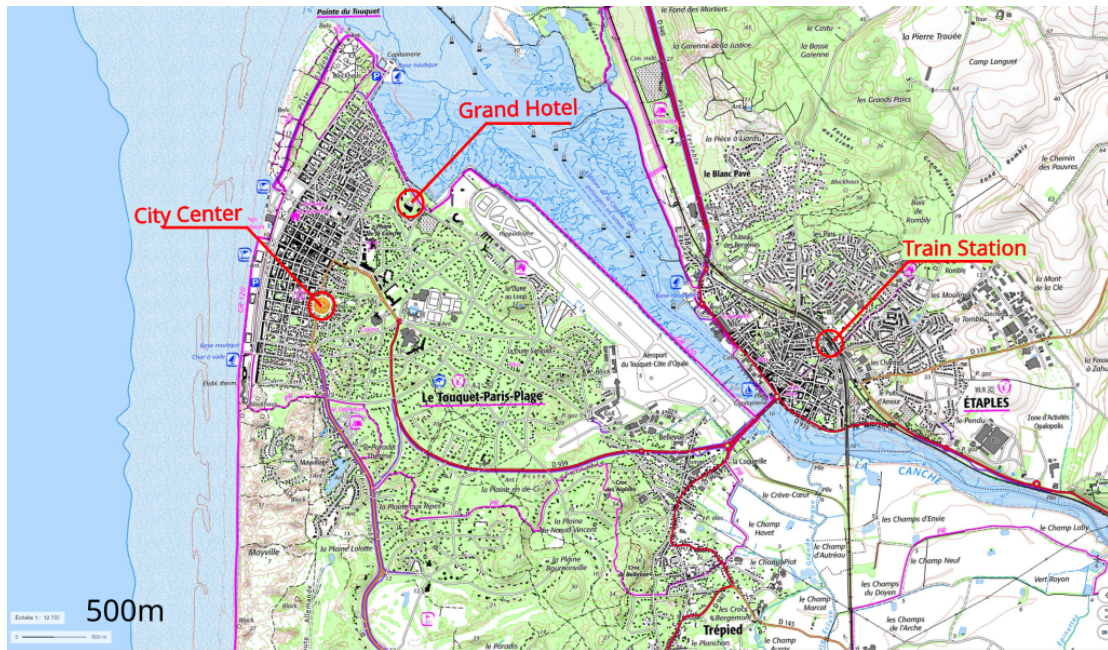
The social event will take place at Nausicaá, a renowned aquarium in Boulogne-sur-Mer. Further details, including the departure time of the shuttle bus and the approximate return time to the hotel, will be communicated closer to the event date.

- **Tuesday Afternoon:**
Participants will have some free time on Tuesday afternoon before departing for Nausicaá. You can choose to explore Le Touquet downtown or relax at the beach during this time.
- **Le Touquet Downtown:**
To explore Le Touquet downtown, you can visit the website of the Tourism Office [<https://en.letouquet.com/>]. There, you will find information about various attractions, restaurants, and activities available in the area.
- **Getting to Le Touquet Downtown from Grand Hotel:**
Le Touquet downtown can be reached from the Grand Hotel with a pleasant 20-minute walk. You can also use Google Maps for directions.

Miscellaneous:

- **Swimming:** While swimming near the estuary close to the hotel, please be cautious of dangerous currents and quicksands. Follow the signs for your safety. If you prefer to swim under supervision, the downtown Le Touquet beach is further away but offers a nice walk and supervised swimming.
- **Walking:** If you enjoy walking, we recommend exploring the Park of the Estuary of la Canche, which is located just 500 m away from the hotel. From there, you can follow the beach southwards to reach downtown Le Touquet, enjoying a beautiful walk.
- **Sunset Viewing:** For a stunning sunset experience, we recommend observing it from the estuary area.
- **Drinks and Dining:** In addition to the bar at the Grand Hotel, Le Touquet offers a variety of restaurants and bars to suit different tastes. Restaurant La Base Nord, situated on the estuary, offers a beautiful setting, while bar L'IMPASSE downtown is one of the many bars that are popular during the summer.
- **Hippodrome:** If you're interested in showjumping, the hippodrome is located very close to the hotel and might be worth to visit for.

Map of Le Touquet



Program

Timetable of Magnonics 2023

	Sunday, July 30 th	Monday, July 31 st	Tuesday, Aug. 1 st	Wednesday, Aug. 2 nd	Thursday, Aug. 3 rd
08:00 - 09:00		08:00 Breakfast nan	08:00 Breakfast nan	08:00 Breakfast nan	08:00 Breakfast nan
09:00 - 10:00		09:00 Silvia Viola Kusminskiy I01 nan	09:00 Xiaoqin Elaine Li I06 nan	09:00 Isabella Boventer I10 nan	09:00 Igor Barsukov I15 nan
10:00 - 11:00		09:30 Moojune Song C01 09:45 Samer Kurdi C02 10:00 Alexander A. Serga C03 10:15 Georg Schmidt I02	09:30 Ruben Leenders C09 09:45 Viktoriia Radovskaia C10 10:00 Igor Ngouagnia C11 10:15 Helmut Schultheiss I07	09:30 Hiroki Matsumoto C12 09:45 Jilei Chen C13 10:00 Yannik Kunz C14 10:15 Mehrdad Eiyasi I11	09:30 H. Kurebayashi C20 09:45 Dennis K. de Wal C21 10:00 Shreyas S. Joglekar C22 10:15 Hugo Merbouche I16 10:45 Coffee break nan
11:00 - 12:00		10:45 Coffee break nan	10:45 Coffee break nan	10:45 Coffee break nan	10:45 Coffee break nan
12:00 - 13:00		11:15 Christian Back I03 11:45 Aya El Kanj C04 12:00 Chris Koerner C05 12:15 Caroline Ross C06 12:30 Lunch	11:15 Maciej Krawczyk I08 11:45 Gianluca Gubbiotti I09 12:15 NSF 12:30 Lunch	11:15 Joo-Von Kim I12 11:45 Hannah Bradley C15 12:00 K.G.Fripp C16 12:15 Artem Litvinenko C17 12:30 Lunch	11:15 Aleksandr Dobrovolskiy I17 11:45 Sanchar Sharma C23 12:00 Richard Schlitz C24 12:15 Denis R. Candido C25 12:30 Lunch
* 13:00 - 14:00					
14:00 - 15:00		14:30 Toeno van der Sar I04 nan	14:30 Social Event nan	14:30 Vincent Vlamincq I13 nan	14:00 Departure nan
15:00 - 16:00		15:00 Nirel Bernstein C07 15:15 Ondřej Wojewoda C08 15:30 Daniela Petti I05 16:00 Coffee break nan		15:00 Qi Wang C18 15:15 Stephanie Lake C19 15:30 Tomosato Hioki I14 16:00 Coffee break nan	
16:00 - 17:00		16:30 Poster 1 nan		16:30 Poster 2 nan	
17:00 - 18:00	16:45 Thibaut Devolder T01				
	17:30 Kei Yamamoto T02				
18:00 - 19:00	18:15 Philipp Pirro T03				
19:00 - 20:00	19:00 Dinner nan	19:00 Dinner P1 nan	19:00 Social Dinner nan	19:00 Dinner P2 nan	

SUNDAY, JULY 30TH

16:45 - 17:30 *T01 : Tutorial.*

Spin Waves: Electrical Methods for the Study of Their Dynamics.

Thibaut Devolder

*Université Paris-Saclay, CNRS, Centre De Nanosciences Et De Nanotechnologies,
91120, Palaiseau, France*

17:30 - 18:15 *T02 : Tutorial.*

Suhl Instability in Spintronics.

Kei Yamamoto

Advanced Science Research Center, Japan Atomic Energy Agency, Japan

18:15 - 19:00 *T03 : Tutorial.*

Computing with Coherent Magnons.

Philipp Pirro

RPTU Kaiserslautern-Landau, Kaiserslautern, Germany

19:00 - 20:00 *Dinner*

MONDAY, JULY 31ST

08:00 - 09:00 *Breakfast*

Session: Hybrid magnonics (photon, phonon, plasmon, quantum) (part 1)

09:00 - 09:30 *I01 : Invited Talk.*

Cavity Magnomechanics: Fundamentals and Applications.

Silvia Viola Kusminskiy

Institute for Theoretical Solid State Physics, RWTH Aachen University, Germany

- 09:30 - 09:45 C01 : Contributed Talk.
Time-Domain Coherent Manipulation of Remotely Coupled Magnonic Resonators.
Moojune Song
Materials Science Division, Argonne National Laboratory, USA
- 09:45 - 10:00 C02 : Contributed Talk.
Filtering and Imaging of Frequency-Degenerate Spin Waves Using Nanopositioning of a Single-Spin Sensor.
Samer Kurdi
Department of Quantum Nanoscience, Kavli Institute of Nanoscience, TU Delft, The Netherlands
- 10:00 - 10:15 C03 : Contributed Talk.
Bose-Einstein Condensation of Parametrically Pumped Magnon Gas to the Uniform Precession State.
Alexander A. Serga
Fachbereich Physik and Landesforschungszentrum OPTIMAS, Rheinland-Pfälzische Technische Universität Kaiserslautern-Landau, Kaiserslautern, Germany
- 10:15 - 10:45 I02 : Invited Talk.
Strong Coupling of Microwaves and Magnons in YIG Microstructures.
Georg Schmidt
Institut Für Physik, Martin-Luther-Universität Halle-Wittenberg, 06099 Halle, Germany
- 10:45 - 11:15 *Coffee break*

Session: Magnetization dynamics and damping (part 1)

- 11:15 - 11:45 I03 : Invited Talk.
Dynamic Detection of Current-Induced Spin-Orbit Magnetic Fields.
Christian Back
School of Natural Sciences, Department of Physics, Technical University of Munich, Germany

- 11:45 - 12:00 *C04 : Contributed Talk.*
Antiferromagnetic Magnon Spintronic Based on Non-Reciprocal and Non-Degenerated Ultra-Fast Spin-Waves in the Canted Antiferromagnet α -Fe₂O₃ .
Aya El Kanj
Unité Mixte De Physique, CNRS, Thales, Université Paris-Saclay, 91767 Palaiseau, France
- 12:00 - 12:15 *C05 : Contributed Talk.*
Frequency Multiplication by Collective Nanoscale Spin-Wave Dynamics.
Chris Koerner
Physics Institute, Martin Luther University Halle-Wittenberg, Germany
- 12:15 - 12:30 *C06 : Contributed Talk.*
Interactions between Magnons and Domain Walls in Garnet Racetracks.
Caroline Ross
MIT, DMSE 6-113, 77 Massachusetts Ave. Cambridge, MA 02139, USA
- 12:30 - 14:30 *Lunch*

Session: Novel techniques of excitation and detection (part 1)

- 14:30 - 15:00 *I04 : Invited Talk.*
Coherent Manipulation of Spins in Diamond via Spin-Wave Mixing.
Toeno Van Der Sar
Department of Quantum Nanoscience, Kavli Institute of Nanoscience, Delft University of Technology, The Netherlands
- 15:00 - 15:15 *C07 : Contributed Talk.*
Spin Torque Driven Skyrmion Resonance Technique in Magnetic Bulk Crystals.
Nirel Bernstein
Department of Applied Physics, The Hebrew University of Jerusalem, Jerusalem 91904, Israel

- 15:15 - 15:30 *C08 : Contributed Talk.*
Phase-Resolved Optical Characterization of Nanoscale Spin Waves.
Ondřej Wojewoda
CEITEC BUT, Brno University of Technology, Purkyňova 123, Brno, 612 00, Czech Republic
- 15:30 - 16:00 *I05 : Invited Talk.*
Three-Dimensional Nanoscale Imaging of Propagating Spin Waves in a Synthetic Antiferromagnet.
Daniela Petti
Physics Department, Politecnico Di Milano, Italy
- 16:00 - 16:30 *Coffee break*
- 16:30 - 19:00 *Poster 1*
- 19:00 - 20:00 *Dinner*

TUESDAY, AUGUST 1ST

08:00 - 09:00 *Breakfast*

Session: Novel techniques of excitation and detection (part 2)

09:00 - 09:30 *I06 : Invited Talk.*

Long-Lived Zone-Boundary Magnons in an Antiferromagnetic Insulator.

Xiaoqin Elaine Li

Physics Department, University of Texas at Austin, U.S.A.

09:30 - 09:45 *C09 : Contributed Talk.*

Ultrafast Nonlinear Conversion of Magnons in an Antiferromagnet.

R. A. Leenders

Department of Physics, Lancaster University, Bailrigg, Lancaster, United Kingdom

09:45 - 10:00 *C10 : Contributed Talk.*

Light-Driven Control of Spin-Wave Damping in an Antiferromagnet.

Viktoriiia Radovskaia

Radboud University, Nijmegen, The Netherlands

10:00 - 10:15 *C11 : Contributed Talk.*

Auto-Oscillation Instability and Pattern Generation in FMR-Driven BiYIG Nanodisks.

Igor Ngouagnia Yemeli

SPEC, CEA, CNRS, Université Paris-Saclay, France

10:15 - 10:45 *I07 : Invited Talk.*

Non-Linear Spin-Wave Excitation of Spin Defects in SiC.

H. Schultheiss

Helmholtz-Zentrum Dresden-Rossendorf, Institute of Ion Beam Physics and Materials Research, Germany

10:45 - 11:15 *Coffee break*

Session: Magnonics in 2D / texture / AFM (part 1)

11:15 - 11:45 *I08 : Invited Talk.*

Naturally Formed Magnonic Crystals: Ferromagnetic Film with Magnetization Stripe Domains.

Maciej Krawczyk

Institute of Spintronics and Quantum Information, Faculty of Physics, Adam Mickiewicz University, Poznań, Poland

11:45 - 12:15 *I09 : Invited Talk.*

Spin-Wave Edge and Cavity Modes in a Moiré Magnonic Crystal.

Gianluca Gubbiotti

Istituto Officina Dei Materiali Del Consiglio Nazionale Delle Ricerche (IOM-CNR), Perugia, Italy.

12:15 - 12:30 *NSF*

12:30 - 14:30 *Lunch*

14:30 - 19:00 *Social Event*

16:00 - 16:30 *Coffee break*

19:00 - 20:00 *Social Dinner*

WEDNESDAY, AUGUST 2ND

08:00 - 09:00 *Breakfast*

Session: Hybrid magnonics (photon, phonon, plasmon, quantum) (part 2)

09:00 - 09:30 *I10 : Invited Talk.*

**Towards Magnonic Logic with Oxide Heterostructures-
Controlling Spin Wave Propagation in Magnonic Waveguides
via Magnetoelectric Coupling.**

Isabella Boventer

*Unité Mixte De Physique, CNRS/Thales, Université Paris-Saclay, 91767 Palaiseau,
France.*

09:30 - 09:45 *C12 : Contributed Talk.*

**Cavity Magnomechanics in a Synthetic Antiferromagnet with
Surface Acoustic Waves.**

Hiroki Matsumoto

Department of Physics, The University of Tokyo, Japan

09:45 - 10:00 *C13 : Contributed Talk.*

**Hybridized Propagation of Spin Waves and Surface Acoustic
Waves in a Multiferroic-Ferromagnetic Heterostructure.**

Jilei Chen

Nan

10:00 - 10:15 *C14 : Contributed Talk.*

**Magneto-optical Investigation of Nonreciprocal Phonon-Magnon
Interaction.**

Yannik Kunz

*Fachbereich Physik and Landesforschungszentrum OPTIMAS, Rheinland-
Pfälzische Technische Universität Kaiserslautern-Landau, 67663 Kaiserslautern,
Germany*

- 10:15 - 10:45 *I11 : Invited Talk.*
Many-Body Magnonic Open Quantum Systems.
Mehrddad Elyasi
Advanced Institute for Materials Research, Tohoku University, Sendai, Japan
- 10:45 - 11:15 *Coffee break*

Session: Magnonic logic and computing, other applications (part 1)

- 11:15 - 11:45 *I12 : Invited Talk.*
Aspects of Unconventional Computing with Nonlinear Magnonics.
Joo-Von Kim
Centre De Nanosciences Et De Nanotechnologies, CNRS, Université Paris-Saclay, 91120 Palaiseau, France
- 11:45 - 12:00 *C15 : Contributed Talk.*
Antiferromagnetic Artificial Neuron Modeling of Biological Neural Networks.
Hannah Bradley
Department of Physics, Oakland University, USA
- 12:00 - 12:15 *C16 : Contributed Talk.*
Nonlinear Chiral Magnonic Resonators: Towards Magnonic Neurons.
K.G.Fripp
Faculty of Environment, Science and Economy, University of Exeter, United Kingdom
- 12:15 - 12:30 *C17 : Contributed Talk.*
A Spinwave-Based Ising Machine.
Artem Litvinenko
Department of Physics, University of Gothenburg, Sweden

12:30 - 14:30 *Lunch*

Session: Magnonics devices (μ wave and THz) (part 1)

14:30 - 15:00 *I13 : Invited Talk.*

Non-Reciprocal Spin Wave Beams in Out-Of-Plane Magnetized Films from Circular Antennas.

Vincent Vlaminck

IMT Atlantique, Microwave Dpt., CS 83818, 29238 Brest, France

15:00 - 15:15 *C18 : Contributed Talk.*

Inverse Design in Magnonics.

Qi Wang

School of Physics, Huazhong University of Science and Technology, Wuhan, China

15:15 - 15:30 *C19 : Contributed Talk.*

Exploring Nonlinear Magnon Dynamics via Amplification of Spin Waves Propagating through Mirrored Spin-Wave Concentrators.

Stephanie Lake

Institut Für Physik, Martin-Luther-Universität Halle-Wittenberg, Germany

15:30 - 16:00 *I14 : Invited Talk.*

Magnon State Tomography and Magnon Noise Control by Non-linearity.

Tomosato Hioki

Advanced Institute for Materials Research, Tohoku University, Japan,

16:00 - 16:30 *Coffee break*

16:30 - 19:00 *Poster 2*

19:00 - 20:00 *Dinner*

THURSDAY, AUGUST 3RD

08:00 - 09:00 *Breakfast*

Session: Magnetization dynamics and damping (part 2)

09:00 - 09:30 *I15 : Invited Talk.*

Observation of Antiferromagnetic Magnons in a Nanodevice in ST-AFMR Experiments.

Igor Barsukov

Physics and Astronomy, University of California, Riverside, CA, USA

09:30 - 09:45 *C20 : Contributed Talk.*

Creation of Nonlinear Magnon Polaritons.

Hidekazu Kurebayashi

London Centre for Nanotechnology, University College London, London WC1H 0AH, UK

09:45 - 10:00 *C21 : Contributed Talk.*

All-Electrical and Spin Seebeck Effect Driven Magnon Transport in Quasi-Two-Dimensional Antiferromagnetic Materials CrPS₄ and MnPS₃.

Dennis K. De Wal

Zernike Institute for Advanced Materials, University of Groningen, the Netherlands

10:00 - 10:15 *C22 : Contributed Talk.*

Spin Wave Assisted Switching of Permalloy Nanomagnets on Yttrium Iron Garnet.

Shreyas S. Joglekar

Institute of Materials, École Polytechnique Fédérale De Lausanne (EPFL), Switzerland

- 10:15 - 10:45 *I16 : Invited Talk.*
True Amplification of Spin Waves in Magnonic Nano-Waveguides.
Hugo Merbouche
Institute for Applied Physics, University of Muenster, Germany
- 10:45 - 11:15 *Coffee break*

Session: Hybrid magnonics (photon, phonon, plasmon, quantum) (part 3)

- 11:15 - 11:45 *I17 : Invited Talk.*
Nonreciprocal Magnonics upon Ferromagnet/Superconductor Heterostructures.
Oleksandr Dobrovolskiy
University of Vienna, Faculty of Physics, Nanomagnetism and Magnonics, Austria
- 11:45 - 12:00 *C23 : Contributed Talk.*
Arbitrary Quantum State Generation of Magnons.
Sanchar Sharma
Theoretical Solid State Physics, RWTH Aachen, Germany
- 12:00 - 12:15 *C24 : Contributed Talk.*
Magnetization Dynamics Affected by Phonon Pumping.
Richard Schlitz
Department of Materials, ETH Zürich, 8093 Zürich, Switzerland
- 12:15 - 12:30 *C25 : Contributed Talk.*
Magnon-Mediated Entanglement of Solid-State Spin Qubits.
Denis R. Candido
Department of Physics and Astronomy, University of Iowa, USA
- 12:30 - 14:30 *Lunch*

14:00 - 15:00 *Departure*

Poster Session 1 (Monday 16:30 - 19:00)

Name	Code	Title
R.E. Arias	PA36	Scattering of Magnetostatic Surface Modes of Ferromagnetic Films by Geometric Defects
B. Assouline	PA05	Amplification of Electron-Mediated Spin Currents by Stimulated Spin Pumping
Z. Boyu	PA19	All-Optical Helicity-Independent Switching State Diagram in Gd-Fe-Co Alloys
R. Ciola	PA22	Spin Dynamics of Skyrmion Lattices in a Chiral Magnet Resolved by Micro-Focused ...
E. Clot	PA31	Development of a NV-Center Microscope for Spin-Wave Spectroscopy
P. Connick	PA46	PT Symmetry Breaking and Topological Features in Dissipatively Coupled Spin Dynamics
A. De	PA41	Spin Dynamics with Inertia in Ultrathin Permalloy Films
R. Dreyer	PA10	Imaging and Phase-Locking of Non-Linear Spin-Wave Phenomena
S. Eimer	PA06	Domain Wall Motion and DMI on Perpendicular Magnetic Anisotropy Based Spintronics ...
V. Errani	PA45	Negative Energy Modes in Antiferromagnets for Amplification and Analogue Gravity
A. Finco	PA18	Probing the Internal Texture of Skyrmions through Spin Waves with a Quantum Sensor
Z. Guo	PA14	Manipulating Exchange Bias with a Single Femtosecond Laser Pulse
P.M. Gunnink	PA16	Zero-Frequency Chiral Magnonic Edge States Protected by Non-Equilibrium Topology
Y. Henry	PA25	On the Nature of the Ferromagnetic Resonance Excitations in Cobalt Stripe Domain ...
T. Ito	PA11	Non-Local Spin Transport Measurement in Ferrimagnetic GdCo Thin Films
V. Iurchuk	PA08	Tailoring Crosstalk between Localized 1D Spin-Wave Nanochannels Using Focused Ion ...
V. Iurchuk	PA07	Strain-Tunable Gyrotropic Dynamics in Individual Magnetic Vortices
M. Jafari	PA35	Static and Dynamic Magnetic Properties of Two-Dimensional Van Der Waals Materials: ...
K. Kotus	PA20	Selective Resonant Triggering of the Skyrmion by Higher-Order Spin-Wave Modes
L. Körber	PA13	Spin Waves in Curved Magnetic Shells: Numerical Techniques and Recent Advances
A. Lentfert	PA21	Coherent Magnetization Dynamics in Strongly Quenched Systems
K.L. Lenz	PA32	Growth of Perpendicular Magnetic Anisotropy in Gallium-substituted Yttrium Iron ...
R. Lopes Seeger	PA38	Spin Wave Properties of CoFeB Grown on Piezoelectric Substrates
M. Massouras	PA27	Noncommutativity of Parametric Spin Wave Excitations in YIG Disks
A. Mucchietto	PA12	Magnonic Grating Coupler Effect, Magnon-Induced Nanostripe Reversal, Magnon ...
K. Nikolaev	PA09	Propagation of Spin Waves in Intersecting Yttrium Iron Garnet Nanowaveguides
B.K. Nikolic	PA04	Spin and Charge Pumping in the Presence of Spin-Orbit Coupling in THz Spintronics ...
G. Olivetti	PA33	Inversion of the Polarity of Angular Velocity inside a Precessing Magnet
S. Pile	PA23	The Asymmetry Quantification of Spin-Wave Dynamics in Single and Double Confined ...
G. Pradhan	PA34	Spin-Wave Dynamics in Curved Magnets
S. Salama	PA42	Micromagnetic Simulations of Magnon Nonlinear Interactions in a YIG Disk Magnetic Vortex
K. Schultheiss	PA24	Modification of Three-Magnon Splitting by In-Plane Magnetic Fields
M.R. Schweizer	PA44	Confinement of Bose-Einstein Magnon Condensates in Adjustable Complex ...
G. Soares	PA40	Damping in Garnet Microdisks Coupled to Microwave Antennas
K. Sobucki	PA17	Three Magnon Processes in Spin-Wave Scattering on Localised Modes for Controllable ...
T. Srivastava	PA39	Resonant Dynamics of Three-Dimensional Skyrmionic Textures in Thin Film Multilayers
D. Stoeffler	PA30	Micromagnetic Study of Parallel Pumping of Spinwaves into CoFeB/By Bilayer with ...
L. Sánchez-Tejerina	PA37	Spin Waves in Ferrimagnets at and around the Angular Magnetization Compensation ...
L. Temdie	PA02	Wave Vector Dependence of the Relaxation Time for Exchange Spin Waves
T. Valet	PA26	Modal Analysis of Axially Symmetric Magnetic Textures
V.I. Vasyuchka	PA43	Efficient Spin-Wave Transmission in YIG/Pt-Interfaced Structures
V. Vlaminck	PA01	Antenna Design for Spin Wave Caustic Beams
A. Voronov	PA28	Spin-Wave Transport in Two-Dimensional Partially-Compensated Ga:YIG Structures
D. Wagle	PA03	Caustic Spin Wave Beams in an Extended Thin Film Excited by a Nanoconstriction
H. Wang	PA29	Long-Distance Coherent Propagation of High-Velocity Antiferromagnetic Spin Waves
S. Yoshii	PA15	Significant Suppression of Magnon Damping in Ultrathin Co Films by Modulating ...

Poster Session 2 (Wednesday 16:30 - 19:00)

Name	Code	Title
Á. m Papp	PB31	Machine-Learned Gradient Patterns in YIG via Focused-Ion-Beam Irradiation
F.G. Aliev	PB11	Dynamics and Reversible Control of the Vortex Bloch Point Domain Wall in Short ...
M. Ardisson	PB35	Modelling a 3-Port Network in Cavity Magnonics for Nonreciprocal RF Devices
N. Beaulieu	PB51	Low Damping of Submicronic Thin Films of YIG Grown by RF Sputtering
M. Bechberger	PB10	Excitation of Propagating Spin Waves in Ga:YIG Thin Films
D. Breitbach	PB12	Bistability Based Magnon Computing
J. Carter-Gartside	PB01	Magnonic Spectral Symmetry-Breaking in a Trilayered Artificial Spin-Vortex Ice
P. Che	PB44	Brillouin Light Scattering Characterization of Voltage-Controlled Magnonic Crystals ...
L. Christienne	PB48	Acoustic Driven Ferromagnetic Resonance in Iron Thin Film: Impact of Spin Wave ...
A.V. Chumak	PB22	Influence of Paramagnetic GGG Substrates on YIG Films at Millikelvin Temperatures
G. Csaba	PB49	Coupled Parametric Excitations in Neighboring Nanomagnets
T. Devolder	PB04	Electrical Evidence and Modeling of the Unidirectionality of the Energy Flow Carried ...
C. Dubs	PB02	Toward Larger-Area Magnonic Platform Materials: 3-Inch, Nanometer-Thin YIG Films
R. Erdelyi	PB07	Numerical Investigations of the Linearity of Magnonic Devices for RF Signal Processing
A.M. Friedel	PB34	Magnetisation Dynamics of Epitaxial Co ₂ MnSi/X/Co ₂ MnAl Heusler Bilayers with ...
P. Graczyk	PB43	Optimizing Acoustic Wave - Spin Wave Resonant Coupling in the Magnetoelastic Systems
J. Greil	PB21	Nanoscale YIG Gratings for Interference-Based Spin-Wave Devices in Thin YIG Layers
J. Greil	PB13	YIG Gratings for Interference-Based Spin-Wave Devices
G. Gubbiotti	PB27	Magnonic Band Structures of CoFeB and CoFeB/Ta/NiFe Meander-Shaped Films
H. Guo	PB08	Control of Bulk and Surface Magnon Modes in 3D Ferromagnetic Nanonetworks by ...
T. Gustafson	PB47	Multi-Port Sample Carrier System for All-Electrical Characterisation of Thin-Film ...
A. Hakam	PB37	Leveraging Spin-Torque Oscillator's Phase Dynamics for Unconventional Computing
A. Hamadeh	PB30	Hybrid Magnonic-Oscillator System: towards the Development of Hybrid Artificial ...
X. Han	PB18	Magnon Junction Effect in Y ₃ Fe ₅ O ₁₂ /CoO/Y ₃ Fe ₅ O ₁₂ Insulating Heterostructures
D. Hayashi	PB19	Observation of Dispersion Relation for Hybridized Magnons in Synthetic Antiferromagnets
C. Heins	PB39	Spin-Wave Quantization and Nonlinear Scattering in Non-Reciprocal Materials
M. Ibarra Gomez	PB41	A Numerical Study of Spin Torque Nano-Oscillators Based Ising Machines
B. Jungfleisch	PB03	Nonlinear Multi-Magnon Scattering in Ensembles of Nanomagnets
A. Khitun	PB05	Traveling Salesman Problem Solution Using Magnonic Combinatorial Device
A. Kolli	PB38	Nonlinear Interactions between Spin-Wave Modes in YIG Microdisks
A. Koujok	PB29	Dynamical Diversity of Magnetization Dynamics in Interacting Systems through Tunable ...
K. Kuenstle	PB36	Magneto-Optical Investigation of Magnetoacoustic Waves in Yttrium Iron Garnet / Zinc ...
W. Legrand	PB23	Understanding the Magnetic Properties of Ultrathin BiYIG Grown by Sputtering
J. Leiberton	PB26	Topological Magnons for Hybrid Magnonic Systems
V. Levati	PB45	Magnetic Nanopatterning of YIG Films via Direct Laser Writing for Magnonics
S. Lord	PB24	Characterising Noncollinear Exchange Coupled Trilayers of Epitaxial ...
S. Mae	PB06	Magnon Suppression Flowing Y ₃ Fe ₅ O ₁₂ via Inductive Effect
L. Martins	PB40	A Non-Volatile Binary Synapse Based on a Vortex Nano-Oscillator
J. Maskill	PB15	Modulated Spin-Wave System for Neuromorphic Machine Learning
H. Merbouche	PB32	Degenerate and Non-Degenerate Parametric Excitation in YIG Nanostructures
A. Mukhopadhyay	PB20	Binary Encoding of Spin-Wave Active Ring Oscillator Modes
T.O. Puel	PB16	Enhancement of Microwave to Optical Spin-Based Quantum Transduction via a Magnon ...
E. Rongione	PB33	Emission of Coherent THz Magnons in an Antiferromagnetic Insulator Triggered by ...
F. Ryburn	PB25	Nonreciprocal Magnetoacoustic Excitation of Magnons in Yttrium Iron Garnet
S. Tacchi	PB09	Spin-Wave Dynamics in Co ₂ MnSi Heusler Magnonic Crystals
C. Trevillian	PB50	Universal Set of Magnon-Mediated Quantum Gates
F. Vilsmeier	PB28	Spatial Control of Hybridization Induced Spin Wave Transmission Stop Band
T. Vogel	PB42	The Influence of the Field Direction on the Symmetries of Angle Dependent FMR Studies ...
Y. Wang	PB17	Electric Field Gated Magnon Transistor
S. Wintz	PB46	Direct Observation of Propagating Spin Waves with Large Non-Reciprocity
J. Zou	PB14	Domain Wall Qubits on Magnetic Racetracks

NOTES

Timetable of Magnonics 2023

	Sunday, July 30 th	Monday, July 31 st	Tuesday, Aug. 1 st	Wednesday, Aug. 2 nd	Thursday, Aug. 3 rd
08:00 - 09:00		08:00 Breakfast nan	08:00 Breakfast nan	08:00 Breakfast nan	08:00 Breakfast nan
09:00 - 10:00		09:00 Silvia Viola Kusminskiy I01 nan	09:00 Xiaoqin Elaine Li I06 nan	09:00 Isabella Boventer I10 nan	09:00 Igor Barsukov I15 nan
10:00 - 11:00		09:30 Moojune Song C01 09:45 Samer Kurdi C02 10:00 Alexander A. Serga C03 10:15 Georg Schmidt I02	09:30 Ruben Leenders C09 09:45 Viktoriia Radovskaia C10 10:00 Igor Ngouagnia C11 10:15 Helmut Schultheiss I07	09:30 Hiroki Matsumoto C12 09:45 Jilei Chen C13 10:00 Yannik Kunz C14 10:15 Mehrdad Eiyasi I11	09:30 H. Kurebayashi C20 09:45 Dennis K. de Wal C21 10:00 Shreyas S. Joglekar C22 10:15 Hugo Merbouche I16 10:45 Coffee break nan
11:00 - 12:00		10:45 Coffee break nan	10:45 Coffee break nan	10:45 Coffee break nan	10:45 Coffee break nan
12:00 - 13:00		11:15 Christian Back I03 11:45 Aya El Kanj C04 12:00 Chris Koerner C05 12:15 Caroline Ross C06 12:30 Lunch	11:15 Maciej Krawczyk I08 11:45 Gianluca Gubbiotti I09 12:15 NSF 12:30 Lunch	11:15 Joo-Von Kim I12 11:45 Hannah Bradley C15 12:00 K.G.Fripp C16 12:15 Artem Litvinenko C17 12:30 Lunch	11:15 Oleksandr Dobrovolskiy I17 11:45 Sanchar Sharma C23 12:00 Richard Schlitz C24 12:15 Denis R. Candido C25 12:30 Lunch
* 13:00 - 14:00					
14:00 - 15:00		14:30 Toeno van der Sar I04 nan	14:30 Social Event nan	14:30 Vincent Vlamincq I13 nan	14:00 Departure nan
15:00 - 16:00		15:00 Nirel Bernstein C07 15:15 Ondřej Wojewoda C08 15:30 Daniela Petti I05 16:00 Coffee break nan		15:00 Qi Wang C18 15:15 Stephanie Lake C19 15:30 Tomosato Hioki I14 16:00 Coffee break nan	
16:00 - 17:00		16:30 Poster 1 nan		16:30 Poster 2 nan	
17:00 - 18:00	16:45 Thibaut Devolder T01				
	17:30 Kei Yamamoto T02				
18:00 - 19:00	18:15 Philipp Pirro T03	19:00 Dinner P1 nan	19:00 Social Dinner nan	19:00 Dinner P2 nan	
19:00 - 20:00	19:00 Dinner nan				