



The EUROPEAN MAGNETISM ASSOCIATION

A voice for Magnetism in Europe

LATEST NEWS



The European School on Magnetism 2023



OPENING



[JEMS2020: YOUNG
RESEARCHER GRANTS.
ABSTRACTS TILL 15 MARCH](#)

[MICROBE BEADS TO RECYCLE
RARE EARTH METALS](#)

[2020 EUROPHYSICS PRIZE :
CALL FOR NOMINATIONS](#)

[EMA AND AUMS SIGN A
MEMORANDUM OF
UNDERSTANDING](#)

[COLLABORATIVE RESEARCH
CENTRE HOMMAGE
ESTABLISHED](#)

FOCUS

Olivier FRUCHART, General Chair of ESM



EMA is a non-profit organisation that promotes actions related to magnetism and magnetic materials, giving magnetism a stronger voice.

EMA is the umbrella organization of JEMS.

- ❑ Foster the advancement of knowledge
- ❑ Contribute to higher education and training
- ❑ Connect people
- ❑ Promote magnetism-related applications
- ❑ Represent the magnetism community in public policy affairs
- ❑ Interact with the magnetism community worldwide



Advance science

Conference & Awards

- Joint European Magnetic Symposia
 - Yearly 500-1000 participants
 - Selected parallel sessions
- Young Scientist and Dominique Givord (career) awards



Higher education

ESM school

- European School on Magnetism
- Fully hybrid
- Educates 150 PhDs yearly
- Lectures, practicals, library, questions, round tables



THE EUROPEAN SCHOOL ON
MAGNETISM

Networking

Communication

- Web site, social networks, newsletter
- Events, jobs, links, news
- Plenary e-lectures and early-career e-seminars



Voice for the community

MoU and networks

- EPS/CMD
- IEEE Mag. Soc.
- IUPAP
- SpintronicFactory
- Magnetometry.eu
- EIMM
- PetaSpin



#1 – EMA: STAY IN TOUCH

<https://magnetism.eu>



contact@magnetism.eu



EmaMagnetism



Newsletter



company/the-ema 



Objectives

EDUCATION ON MAGNETISM

basic + specialized lectures 50/50

2022: Basic Magnetism for Sustainable Development

To be held 11-23 Sep 2022, Saarbrücken, Germany. Chair: Leon Abelmann.

2021: From fundamental properties of matter to magnetic materials and applications

Cluj-Napoca, Romania (6-17 Sep, 2021). Chair: Daniel Andreica.

2020: Fundamentals of Magnetism (online school)

Online due to the COVID-19 pandemic (28 Sep-08 Oct, 2020). Chair: Olivier Fruchart, co-chairs: Leon Abelmann, Bertrand Dupé

2019: Experimental techniques

Brno, Czech Republic (2-13 Sep 2019). Chair: Michal Urbanek (CZ).

2018: Magnetism by Light

Krakow, Poland (17-28 Sep 2018). Chair: Marek Przybylski (PL).

2017: Condensed Matter Magnetism: bulk meets nano

Cargèse, Corsica, France (9-20th Oct 2017). Chair: Virginie Simonet (FR).

2015: From basic magnetic concepts to spin currents

Cluj-Napoca, Romania (24 Aug - 4 Sep), at Universitatea Babeş Bolyai (V. Pop, A. Pop). Chair: Laurent Vila (FR).

2013: Magnetism for Energy

Cargese, Corsica, France (25 Feb - 8 Mar). Chair: Nora Dempsey (FR) and Oliver Gutfleisch (DE).

2011: Time-dependent phenomena in magnetism

Târgoviște, Romania. Chair: Jan Vogel (FR).

2009: Models in magnetism : from basic aspects to practical uses.

Timișoara, Romania. Chair: Claudine Lacroix (FR).

2007: New magnetic materials and their functions.

Cluj-Napoca, Romania. Chair: Olivier Isnard (FR).

2005: New experimental approaches to Magnetism

Constanța, Black Sea, Romania. Chair: Stefania Pizzini (FR).

2003: Magnetism of Nanostructured Systems and Hybrid Structures

Brasov, Romania.

NETWORKING

Students <-> Lecturers <-> Industry

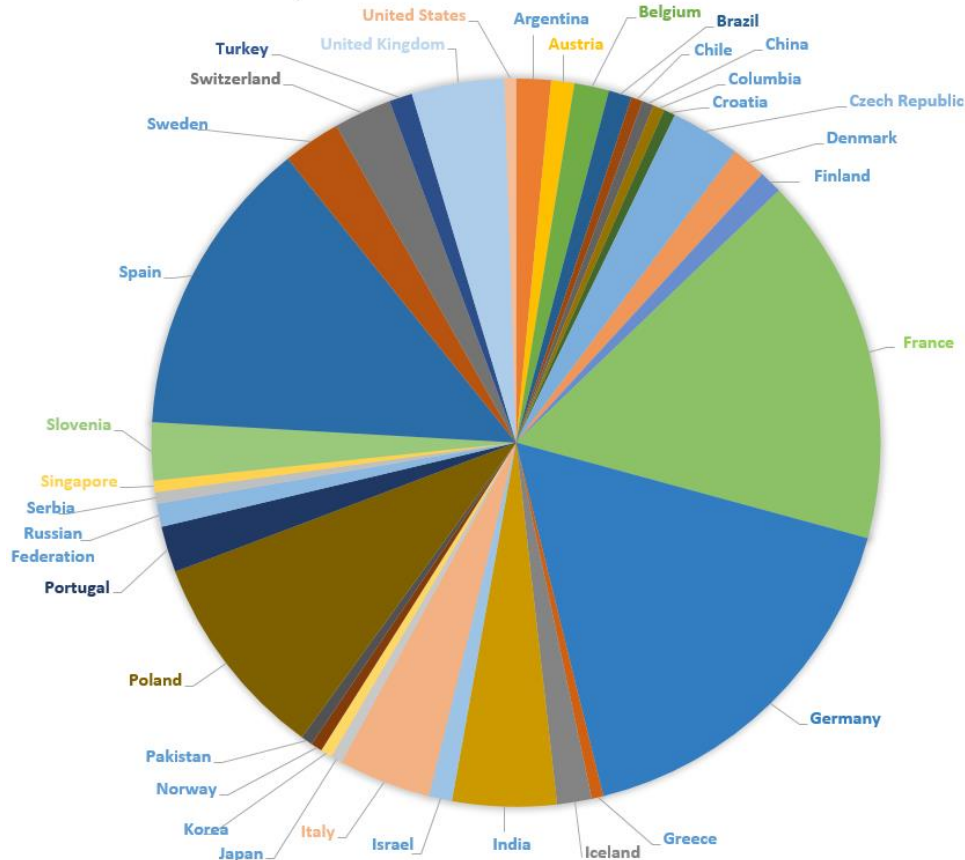
Key facts

- Large : 90-110 students + online (30-100)
- Long : 10/11 full days
- Broad scope ; mix communities
- Affordable for all : low cost; some grants
- Timing: yearly

Means

- 10 / 12 lecturers
- 30-40h interactive lectures
- Question sessions (8h)
- Practicals (4-8h per student)
- Library dedicated to magnetism
- Final critical analysis by students

REQUEST FOR PARTICIPATION IN ESM2023



- International
- Develop your scientific and collaborative experience
- Build a community that does not disappear



https://twitter.com/ESM_School



<https://www.facebook.com/groups/1337651566277855>

(private group – Feel free to share pictures)



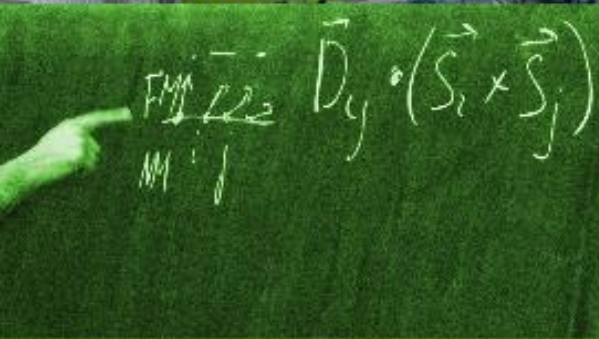
Advertise !!!

THE EUROPEAN SCHOOL ON MAGNETISM

2024

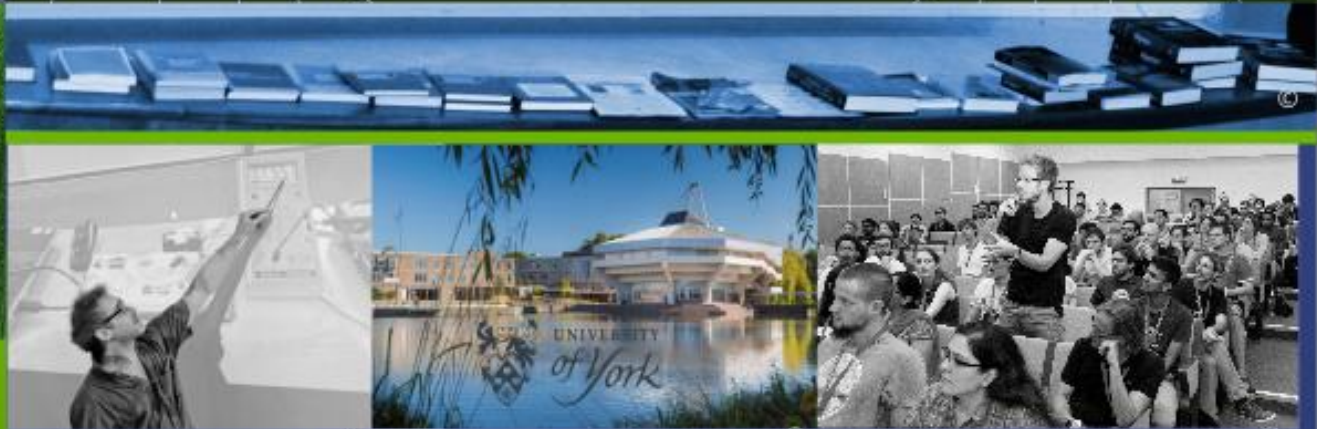
Magnetism for energy efficient devices

10 - 21 June
York, UK



Local committee

Stuart CAVILL (Chair)



The chairs for 2023



Olivier
FRUCHART,
Grenoble,
France

Lucas PEREZ



Madrid, Spain

Bertrand
DUPÉ,
Liège,
Belgium



The participants

■ Onsite at La Cristalera



■ Online: we are all committed to provide the best experience to you

ESM2023 – TIMETABLE

The EUROPEAN
MAGNETISM ASSOCIATION



YOU PROPOSE THE CONTENT!

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
8:30-9:00								INC Summer school Opening				
9:00-9:30		Magnetic interactions Magnetic order	Light-matter interaction	Magnetic microscopy	Precessional dynamics and spin waves	Spin-dependent transport	How to write a scientific paper	Historical hints & looking to the future	Advanced Fabrication	AFM spintronics Altermagnetism	Nanomagnetism and spintronics for ICT	Nanomagnetism for biology
9:30-10:00		Oscar Iglesias	Jan Vogel	Claire Donnelly	Oksana Fesenko	Aurélien Manchon	Ron B. Goldfarb	Bernard Dieny	Denys Makarov	Joerg Wunderlich	Bernard Dieny	Lucas Perez
10:00-10:30												
10:30-11:00												
11:00-11:30		SO interactions Magnetic anisotropy	Spin Textures	Advanced instrumentation (P, light, pump-probe....)	Surface, molecular and interfacial magnetism	Spin-torque & spin-Hall effects	Industrial perspective	Multifunctional Nanostructures	Advanced k-space instrumentation (scatter. & photoemission)	2D transport: TI, Weyl	Nanomagnetism for Energy (EMA plenary lecture)	Future technologies for societal challenges
11:30-12:00		Oscar Iglesias	Oksana Fesenko	Claire Donnelly	Juanjo de Miguel	Aurélien Manchon	David Salido	Denys Makarov	Nicolas Jaouen	Joerg Wunderlich	Alberto Bollero	Olivier Fruchart
12:00-12:30												
12:30-13:00	ARRIVAL	Poster clips	Poster clips	Poster clips	Poster clips	Poster clips	Remarks				Evaluation	CLOSING
13:00-13:30												
13:30-14:00												
14:00-14:30												
14:30-15:00	ESM opening	Q&A	Q&A	Q&A	Q&A	Q&A		Q&A	Q&A		Q&A	DEPARTURE
15:00-15:30												
15:30-16:00	Fields, moments	Magnetic Domains, DWs	Measuring magnetism: conventional magnetometry	Hands-on activities	Hands-on activities	Hands-on activities		Industrial perspective	Oxtronics, VdW and beyond		Nanomagnetism for Oncology	
16:00-16:30	Ron B. Goldfarb	Oksana Fesenko	Stuart Cavill					Jeff Childress	Jacobo Santamaria		M ² Puerto Morales	
16:30-17:00				Onsite / Online	Onsite / Online	Onsite / Online	Excursion			Guided visit to La Granja & Segovia		
17:00-17:30												
17:30-18:00	Magnetism of atoms	Magnetization reversal, Hysteresis	Onsite sports									
18:00-18:30												
18:30-19:00	Juanjo de Miguel	Olivier Fruchart	Online tutorials		Poster session 1	Poster session 2		Assets of PhDs for a career	Student round-tables feedback		Hands-on activities	
19:00-19:30								Intro and small-group round-tables			Onsite / Online	
19:30-20:00												
20:30-21:30										School dinner		
21:30 - ...				Women in magnetism								

Lectures

- Ask questions in #lectures or by raising hand during the lecture
 - Online moderator answers easy ones
 - Tough ones: kept for ? sessions
- Slides will be available on ESM web site (slides since 2003)
- Recordings
 - Copyright belongs to lecturer
 - Private recording and sharing is prohibited
 - ESM sessions recorded and shared upon the lecturer's consent






Technical aspects



- Be connected 5 min before each session for possible announcements
- Favor headsets versus speakers and microphone, turn off the mic unless you need it, for the sake of avoiding echo.

Question sessions

- Post questions in the box onsite, or online in #lectures or #questions
- Organizers dispatch the questions to the lecturers, who provide a quick answer during the question sessions

← → ↻ ⚠ Non sécurisé | magnetism.eu/esm/repository-topics.html ☆ ⚙

The European School on Magnetism

[Home](#) [Scope](#) [Committees](#) [Repository](#) [History](#) [Contact](#) 2017

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The lectures of all ESM schools since 2003 are ordered here in terms of topics. Those pertaining to several topics are listed several times. The topics are:

Magnetic field and moments

- [2020] Origin of magnetism (spin and orbital momentum, atoms and ions, paramagnetism and diamagnetism): **STEPHEN BLUNDELL**, Oxford, UK [[Slides](#) | [Recording](#)]
- [2020] Fields, moments, units: **OLIVIER FRUCHART**, Grenoble, France [[Slides](#) | [Recording](#)]
- [2019] Fields, moments, units: **OLIVIER FRUCHART**, Grenoble, France [[Abstract](#) | [Slides](#)]
- [2019] Magnetism of atoms, Hund's rules, spin-orbit in atoms: **VIRGINIE SIMONET**, Grenoble, France [[Abstract](#)]
- [2018] Units in Magnetism (practical): **OLIVIER FRUCHART**, Grenoble, France [[Questions](#) | [Answers](#)]
- [2018] Magnetism of atoms and ions: **JANUSZ ADAMOWSKI**, Kraków, Poland [[Abstract](#) | [Slides](#)]
- [2018] Fields, Moments, Units, Magnetostatics: **RICHARD EVANS**, York, UK [[Abstract](#) | [Slides](#)]
- [2017] Fields, Units, Magnetostatics: **LAURENT RANNO**, Grenoble, France [[Abstract](#) | [Slides](#)]
- [2017] Magnetism of atoms and ions: **WULF WULFHEKEL**, Karlsruhe, Germany [[Abstract](#) | [Slides](#)]
- [2017] Units in Magnetism (practical): **OLIVIER FRUCHART**, Grenoble, France [[Questions](#) | [Answers](#)]
- [2015] Units in Magnetism (practical): **OLIVIER FRUCHART**, Grenoble, France [[Questions](#) | [Answers](#)]

Topics

- Units, fields and moments
- Exchange, magnetic ordering, magnetic anisotropy
- Temperature effects and excitations
- Correlated systems
- Transport
- Magnetization processes
- Simulations
- Materials
- Nanoparticles, microstructures etc
- Nanomagnetism and spintronics
- Techniques
- Applications and interdisciplinary magnetism
- Industry perspectives
- Open sessions

Tutorials / Practicals

- 11 topics during the week, either fully onsite or fully online
- Presentation at the opening, choice before Monday 4th 8pm
- Allocation made by Tuesday 5th morning
- More information from each lecturer

Library

- 50 books available onsite
- Ask advice to organizers or lecturers if you are seeking specific info
- Browse onsite. Borrow overnight

Posters

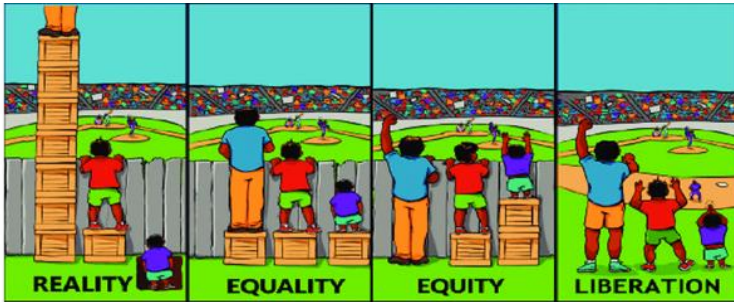
- Post your teaser (pptx or pdf) on Dropbox (see Discord). 2 slides max.
- Clips the first week, before lunch
- 2 slots for presentation: 8th and 9th, each for half (link on Discord)
 - Link on Discord for the detailed list
 - Check title and link for online

8th	9th
A → K	L → Z

- Prizes: 2 invitations to attend ICM2024 in Bologna, plus many books

Women & Diversity in Magnetism

- Thursday evening:
- Come, share & listen



Claire
Donnelly



Sandra
Ruiz Gomez

We want to hear from you!

Practical information

- Lucas
 - Laundry

Admin

- Payment
 - Sorry again for the delay
 - Thanks if you already paid
 - Check if in the pipes otherwise
- Certificates of attendance and payment issued after the school ends