



The EUROPEAN MAGNETISM ASSOCIATION

A voice for Magnetism in Europe

LATEST NEWS   

The European School on Magnetism 2024



OPENING



[JEMS2020: YOUNG RESEARCHER GRANTS. ABSTRACTS TILL 19 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

Bertrand Dupé, General Chair of ESM



ESM
The European School on Magnetism



JEMS
The Joint European Magnetic Symposia



JOB MARKET
Open positions related to Magnetism



LINKS
Agenda
Societies
Companies
Tools

#1 – EMA: MISSION

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.

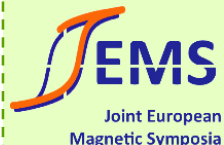
- ❑ Foster the advancement of knowledge
- ❑ Contribute to higher education and training
- ❑ Connect people
- ❑ Promote magnetism-related applications
- ❑ Represent the magnetism community in public policy affairs
- ❑ Interact with the magnetism community worldwide



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



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](https://www.linkedin.com/company/the-ema) 



Objectives

EDUCATION ON MAGNETISM

basic + specialized lectures 50/50

2022: Basic Magnetism for Sustainable Develoment

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 pandemy (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 Urbaneek (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.

Timisoara, 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

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

2003: Magnetism of Nanostructured Systems and Hybrid Structures

Brasov, Romania.

NETWORKING

Students <-> Lecturers <-> Industry

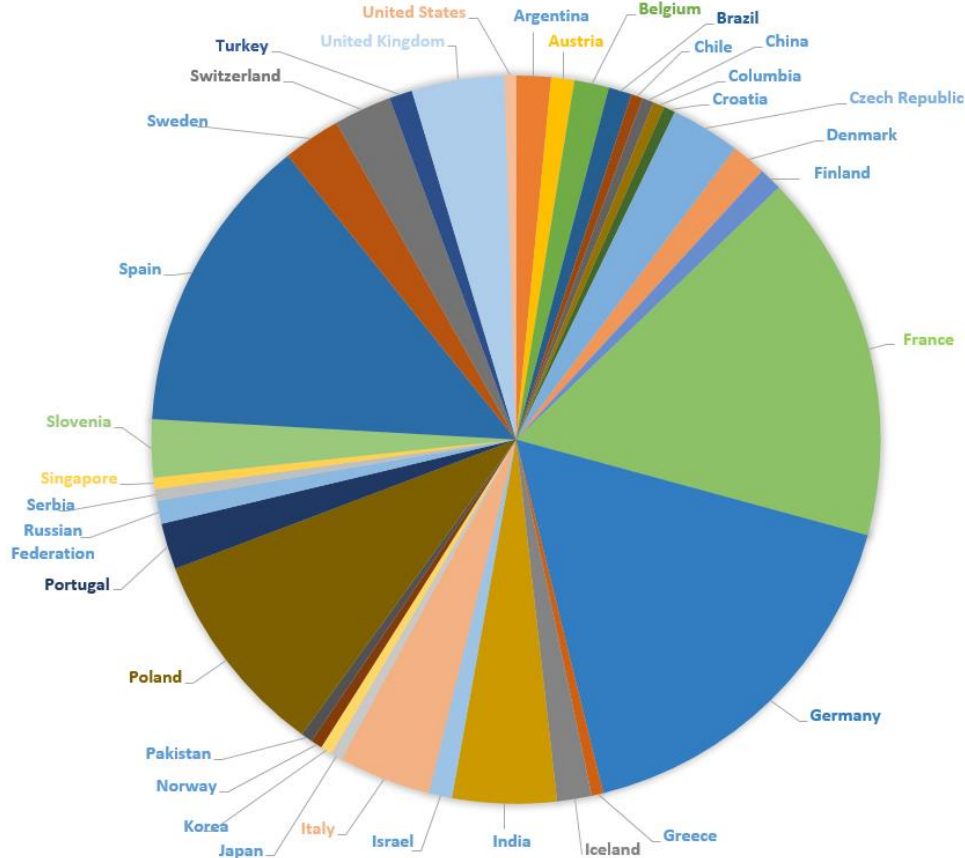
Key facts

- 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)
- 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)



ESM2025 in Liège

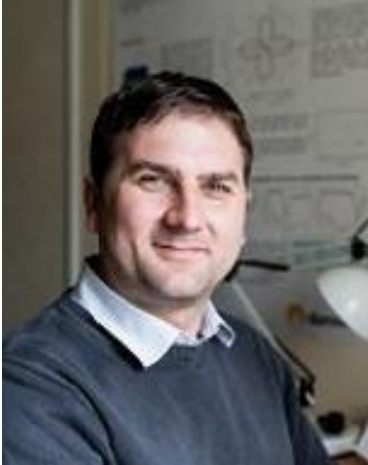
topology for low energy spintronics

Organizers:
Prof. Dr. Bertrand Dupé
Dr. Sebastian Meyer
Prof. Dr. Eric Bousquet
Prof. Dr. Philippe Ghosez



The chairs for 2024

Stuart Cavill



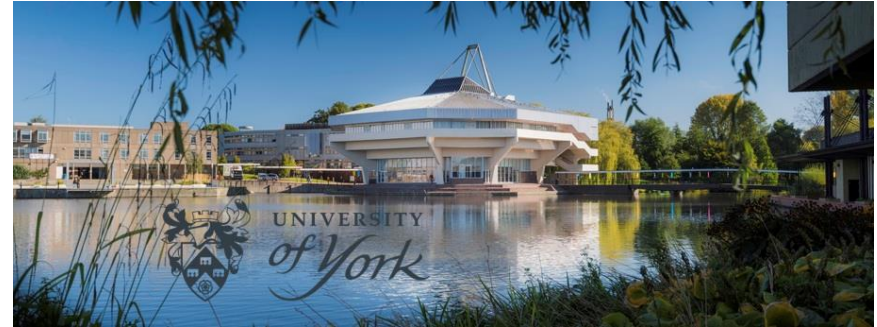
York, UK

Bertrand
DUPÉ,
Liège,
Belgium



The participants

- Onsite at University of York



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

ESM2024 – TIMETABLE

	Monday 26th	Tuesday 27th	wednesday 28th	Thursday 29th	Friday 30th	Saturday 31st	Sunday 1st	Monday 2nd	Tuesday 3rd	Wednesday 4th	Thursday 5th
8:30-9:00		opening									
9:00-9:30		Fields, magnetostatics, units (R. Evans)	Dipolar and exchange spin waves (B. Hillebrands)	DFT applied to magnetism (S. Blügel)	Tutorials - G/N/69 + comp. lab	Tutorials - G/N/69 + comp. lab		Permanent magnets (P. Tozman)	Quantum spin transport (F. Casanova)	career 1	
9:30-10:00											
10:00-10:30		atomic magnetism (J. Staunton)	Magnetization reversal processes (A. Kimel)	EMA seminar (S.A Cavill)				Data storage and Neuromorphic computing 1 (F. Mizrabi)	Magnetism in communications (P. Pirro)	career 2	tutorial or lab tour
10:30-11:00											
11:00-11:30		coffee/tea	coffee/tea	coffee/tea	coffee/tea	coffee/tea		coffee/tea	coffee tea	coffee tea	coffee tea
11:30-12:00		Exchange interactions, ordering and magnetic structures (J. Staunton)	Spintronics / orbitronics (A. Ferreira)	Micromagnetics and atomistic spin dynamics (R. Evans)	Tutorials - G/N/69 + comp. lab	Tutorials - G/N/69 + comp. lab		Data storage and Neuromorphic computing 2 (F. Mizrabi)	break	career 3	tutorial or lab tour
12:00-12:30											
12:30-13:00											
13:00-13:30		lunch	lunch	lunch	lunch	lunch + coffee/tea		lunch	lunch	lunch	lunch
13:30-14:00											
14:00-14:30	arrival of participants	Magnetic Anisotropy (A. Kimel)	Q&A	Q&A	Q&A			Q&A	Q&A	Q&A	
14:30-15:00											tutorial or lab tour
15:00-15:30		surface and interface magnetism (S. Blügel)	Measuring magnetism (S. A. Cavill)	Micromagnetics and atomistic spin dynamics (R. Evans)	Magnetocalorics (K. Morrison)			Magnetic sensors (G. Fernandez)	poster session	Magnetic microscopy (C. Donnelly)	
15:30-16:00											
16:00-16:30		coffee/tea	coffee/tea	announcements - coffee/tea	coffee/tea	free afternoon		coffee/tea	coffee/tea	coffee/tea	coffee/tea
16:30-17:00		domains and domain walls (S. Blügel)	Spin wave resonance techniques (B Hillebrands)		career perspective (P. Hasnip)			poster session	poster session	Voltage Control of Magnetism (M. Bibes)	tutorial or lab tour
17:00-17:30				free time							poster prize
17:30-18:00											
18:00-18:30								women in magnetism (C. Donnelly)	equal opportunity session (C. Donnelly)		
18:30-19:00											social dinner
19:00-19:30											
19:30-20:00											
20:30-21:30											closing

Lectures

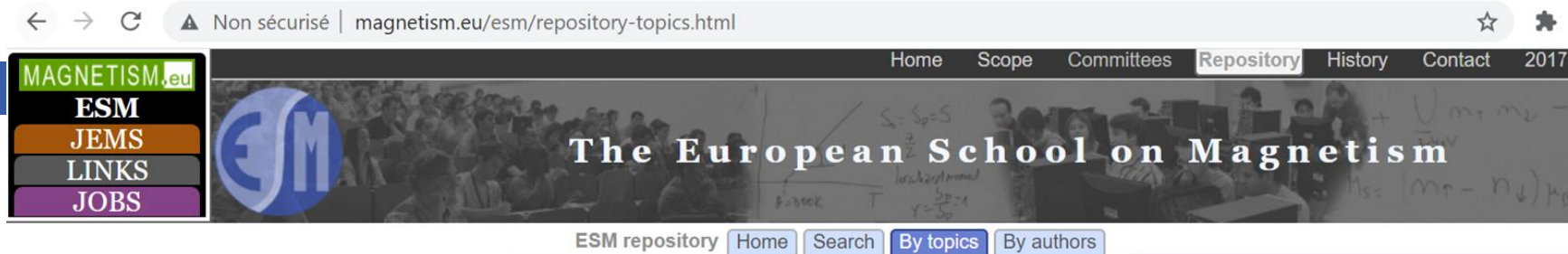
- Ask questions in #lectures or by raising hand during the lecture
 - Online moderator answers easy ones
 - Tough ones: kept for ? sessions
- Slides will be available on ESM web site (slides since 2003)
- Recordings
 - Copyright belongs to lecturer
 - Private recording and sharing is prohibited
 - ESM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

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ESM
JEMS
LINKS
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 **The European School on Magnetism**

ESM repository Home Search **By topics** By authors

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

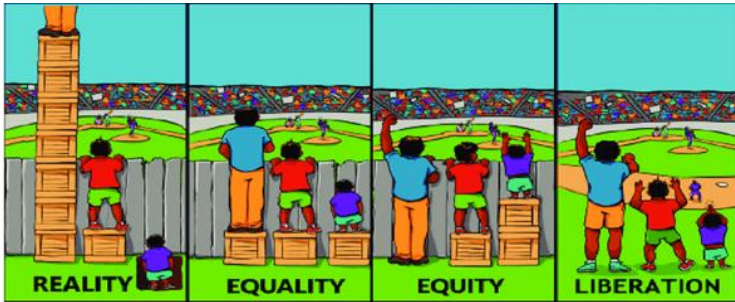
- 11 topics during the week, either fully onsite or fully online
- Presentation at the opening, choice before Monday 4th 8pm
- Allocation made by Tuesday 5th morning
- More information from each lecturer

Posters

- Prepare a video teaser of 30s for the website
- Deadline for sending teasers is Friday 30th before lunch
- 3 slots for poster presentation: 2nd and 3rd
 - list on Discord for the detailed list
 - Make one to one discussion in the evening for online posters
- Prizes: 4 invitations to attend ICM2025 in Frankfurt, plus many books

Women & Diversity in Magnetism

- Monday evening:
- Come, share & listen



Claire
Donnelly



Sofia
Ferreira

We want to hear from you!

Practical information

- schedule
 - We will update you with starting hours

Admin

- Certificates of attendance and payment issued after the school ends