



Announcement

(First Round)

1. Introduction

In recent years, the field of magnetism has shown remarkable progress, with altermagnets emerging as a scientific breakthrough in 2024. Altermagnets, with their unique magnetic properties distinct from traditional magnets, hold the promise of revolutionizing spintronic applications. However, despite significant research efforts, many aspects - such as the theoretical framework, precise control of their magnetic behavior, and the optimization of synthesis routes-remain areas of active investigation.

Simultaneously, magnetic symmetry lies at the heart of understanding the fundamental physics of magnetic materials. It provides a powerful framework for classifying and predicting unconventional magnetic phases in materials, enabling researchers to design new compounds with tailored magnetic properties. The complex interplay between magnetic symmetry and the physical properties of materials has created a growing demand for a comprehensive understanding of these concepts, both at a fundamental level and in the context of real-world applications.

In this exciting research landscape, the Workshop on Altermagnets and School on Magnetic Symmetry has been organized to discuss recent achievements and advancements in the field of unconventional magnetism. This event aims to provide a platform where researchers, scholars, and students can share the latest research findings, exchange ideas, and initiate new collaborations in the rapidly evolving field of altermagnetism. By combining in-depth discussions on altermagnets with educational sessions on magnetic symmetry, the event seeks to foster a deeper understanding of these critical areas in unconventional magnetism and drive further innovation in the field.

2. Workshop & School Theme

The workshop will focus on in-depth discussions of altermagnets, including their novel properties, synthesis methods, potential AI-assisted discovery, and advanced device applications. The school on magnetic symmetry will provide both fundamental and advanced knowledge about magnetic symmetry theories, group-theoretical approaches, and their implications for understanding unconventional magnetic materials.

3. Organizing Committee



Dr. Alessandro Stroppa
(CNR-SPIN L'Aquila)



Dr. Michele Reticcioli
(CNR-SPIN L'Aquila)



Prof. Qihang Liu
(SuSTech)



Prof. Sang-Wook Cheong
(Rutgers University)



Prof. Wei Ren
(Shanghai University)



Assoc. Prof. Cheng Tang
(Shanghai University)

4. Date & Venue

Date:

June 23-26, 2025 Workshop & School

Venue:

Shanghai University (Baoshan Campus), 99 Shangda Road, Baoshan District,
Shanghai, China

Website:

<https://conferences.koushare.com/CNRSHUInternationalWorkshopSchool>

QRCode:



5. Invited Speakers

Dr. **Šmejkal Libor** (JGU Gutenberg, Germany)

Prof. **Paolo Radaelli** (University of Oxford, UK)

Prof. **Congjun Wu** (Westlake University, Hangzhou, China)

Prof. **Xiangang Wan** (Nanjing University, Nanjing, China)

Prof. **Cheng Song** (Tsinghua University, Beijing, China)

Prof. **Kaiyou Wang** (Institute of Semiconductor, Chinese Academy of Science, Beijing, China)

Prof. **Hikaru Watanabe** (University of Tokyo, Japan)

Prof. **Hyun-Wook Lee** (POSTECH, Pohang, Korea)

Assist. Prof. **Zhida Song** (Peking University, Beijing, China)

Prof. **Chang Liu** (Southern University of Science and Technology, Shenzhen, China)

Prof. **ChengCheng Liu** (Beijing Institute of Technology, Beijing, China)

Prof. **Dawei Shen** (National Synchrotron Radiation Laboratory, Hefei, China)

Prof. **DingFu Shao** (Chinese Academy of Science, Hefei, China)

Prof. **Paolo Barone** (CNR-SPIN, Italy)

Assoc. Prof. **Junwei Liu** (The Hong Kong University of Science and Technology, Hongkong, China)

Dr. **Mengli Hu** (IFW Dresden, Germany)

Assoc. Prof. **Peng-Jie Guo** (Renmin University of China, Beijing, China)

Assoc. Prof. **ShanShan Wang** (Southeast University, Nanjing China)

Prof. **Yang Gao** (University of Science and Technology of China, Hefei, China)

6. School Lectures

Juan Manuel Perez-Mato

(Universidad del País Vasco, Bilbao, Spain)

<https://www.cryst.ehu.es/>

Qihang Liu & Xiaobing Chen

(Southern University of Science and Technology, Shenzhen, China)

www.findspingroup.com

7. Schedule (Temporary)

June 22, 2025

12:00 – 21:00 Arrival and Registration

June 23, 2025

8:00 – 12:00 Opening and Workshop

12:00 – 14:00 Lunch

14:00 – 18:00 Workshop

18:00 – 21:00 Dinner

June 24, 2025

8:00 – 12:00 Workshop

12:00 – 14:00 Lunch

14:00 – 18:00 Workshop

18:00 – 21:00 Dinner

June 25, 2025

8:00 – 12:00 Workshop

12:00 – 14:00 Lunch

14:00 – 18:00 Visiting

18:00 – 21:00 Dinner

June 26, 2025

8:00 – 12:00 Workshop

12:00 – 14:00 Lunch

14:00 – 18:00 Workshop

18:00 – 21:00 Dinner

8. Registration

Due to limited availability, early registration is highly encouraged. You can register conveniently at:

<https://conferences.koushare.com/CNRSHUInternationalWorkshopSchool/register/5957>

The registration deadline would be April 15, 2025.

9. Contact

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Workshop on Altermagnets and School on Magnetic Symmetry

Shanghai 2025, June 23rd – 26th

Registration and all information: <https://conferences.koushare.com/CNRSHUInternationalWorkshopSchool>

School Lecturers:

Juan Manuel Perez-Mato
(University of the Basque Country)
<https://cryst.ehu.es>
Qihang Liu
Xiaobing Chen
(SUSTech Shenzhen, China)
www.findspingroup.com

Aims and Scope:

Magnetic symmetry analysis is an excellent tool for describing complex and emerging magnetic phases in condensed matter physics. In particular, the concept of spin group symmetries has gained a renewed interest as a valuable approach for classifying novel magnetic phases, including altermagnets and recently identified unconventional magnets.

Workshop Invited Speakers:

Libor Šmejkal
(JGU Gutenberg, Germany)
Paolo Radaelli
(University of Oxford, UK)
Congjun Wu
(Westlake Univ., Hangzhou, China)
Sang-Wook Cheong
(Rutgers University, USA)
Paolo Barone
(CNR-SPIN Rome, Italy)
Xiangang Wan
(Nanjing University, China)
Cheng Song
(Tsinghua University, China)
Kaiyou Wang
(Ch. Academy of Sc., Beijing, China)
Hikaru Watanabe
(University of Tokyo, Japan)
Hyun-Woo Lee
(POSTECH, Pohang, Korea)
Full list available online

This combined Workshop-School event aims at providing an overview of recent theoretical and experimental research on altermagnetism and unconventional magnetism, while offering practical lectures about advanced symmetry analysis methods for studying magnetic phases. The Workshop features invited talks introducing fundamental aspects of unconventional magnetism and presenting recent research studies. The School covers applications of symmetry analysis, including hands-on sessions on Spin Groups, Magnetic Groups and Altermagnetism.

Students, PhDs, postdocs and young researchers working on magnetism, electronic structure and materials science are strongly encouraged to attend.

Early-bird deadline: April 1st

Organizing Committee:

Alessandro Stroppa
Michele Reticcioli
(CNR-SPIN L'Aquila, Italy)
Wei Ren
Cheng Tang
(Shanghai University, China)
Qihang Liu
(SUSTech Shenzhen, China)
Sang-Wook Cheong
(Rutgers University, USA)

Venue: SHU Shanghai Univ.
(Baoshan Campus)

Arrival:
22/6/2025
Departure:
27/6/2025

