

4th Workshop on Magnetic Nanoparticles and Hyperthermia

Interplay Between Spin and Particle Dynamics

Workshop venue: Salón de Actos, Instituto de Materiais (iMATUS), Universidade de Santiago de Compostela, Spain

Date: 03-04 March 2025

Contact: David Serantes (david.serantes@usc.gal), Roy Chantrell (roy.chantrell@york.ac.uk)

Monday 3rd

09:50 Welcome

Session 1: Simulations of magnetic fluids

10:00 Akira Satoh PARTICLE-BASED SIMULATION METHODS (25+5 min)

10:30 Kazuya Okada SIMULATIONS OF MAGNETIC CUBIC PARTICLES (30+10)

11:10 Coffee break 30 min

11:40 Seiya Suzuki SIMULATIONS OF SPHERICAL AND ROD-LIKE PARTICLES (30+10)

12:20 Akira Satoh SIMULATIONS OF MAGNETIC MICROSWIMMERS' MOTION (25+5)

12:50 Lunch time

Session 2: Experiments

14:00 Puerto Morales, Yilian Fernández-Afonso, Antonio Santana PARTICLE PREPARATION AND MEASUREMENT AT ICM (45+15)

15:00 Lucía Gutiérrez HYPERTHERMIA STUDIES IN ZARAGOZA GROUP (25+5)

15:30 Thomas van Zanten CELL STUDIES AND VISUALISATION (25+5)

16:00 Coffee and discussion 30 min

Session 3: Theory

16:30 Sergiu Ruta OVERVIEW OF THE KINETIC MONTE CARLO METHOD (25+5)

17:00 Òscar Iglesias, Siraj Ul Haq NEW VERSION OF CODE (25+5)

17:30 Ondrej Hovorka MACHINE LEARNING OVERVIEW AND APPLICATIONS (25+5)

18:00 Roy Chantrell CLUSTER ANALYSIS USING MAXIMUM ENTROPY APPROACH (25+5)

Tuesday 4th

Open discussion on possible developments and areas for collaboration (ideas welcome)

09:30 Start of the meeting

11:10 Coffee break 30 min

11:40 Continue discussions until end.

13:00 Lunch

14:00 Continue discussions

16:00 End of meeting.

Speakers:

Akira Satoh, Akita Prefecture University, Xapón

Kazuya Okada, Saitama Institute of Technology, Xapón

Seiya Suzuki, National Institute of Technology, Xapón

María del Puerto Morales, ICMM-CSIC, Spain

Yilian Fernández-Afonso, ICMM-CSIC, Spain

Antonio Santana, ICMM-CSIC, Spain

Lucía Gutiérrez, INMA-CSIC, Spain

Thomas van Zanten, INMA-CSIC, Spain

Sergiu Ruta, Sheffield Hallam University, UK

Òscar Iglesias, Universitat de Barcelona, Spain

Siraj Ul Haq, Universidade de Santiago de Compostela, Spain

Ondrej Hovorka, University of Southampton, UK

Roy Chantrell, University of York, UK

Organizers

LABSIS - iMATUS, Univ. Santiago de Compostela, Spain

Computational Magnetism Group, University of York, UK

