



PROGRAM

The multidisciplinary conference JDN2022 is dedicated to new results, obtained using neutron scattering techniques, in various scientific domains representative of the whole french users community. We are also very pleased to announce that the Spanish Community will contribute to this edition. Five sessions will be organized:

- A. Magnetism and Materials,
- B. Soft Matter and Biology,
- C. French Neutron Scattering Society (SFN) PhD prize,
- D. Instrumentation,
- E. News from the facilities,
- F. Neutron Scattering Associations,
- G. Molecular Modelling, Optical and Neutron spectroscopies,
- H. Diffraction at the European Spallation Source (ESS).

Each session will be introduced by invited talks (40 min. plenary and 30 min. keynote), which will be followed by a series of oral communications (15 min.). Several poster sessions will also take place during the whole conference, with a Best Poster Award for a deserving young scientist. The sessions A to E will be held on Monday 14/11 and Tuesday 15/11 in the main conference room. The sessions D and E will be held in parallel on Wednesday 16/11 morning and Thursday 17/11 morning (the rooms of the sessions will be indicated on site).

On Wednesday afternoon, after a “free time” session, a “Cesta Punta” session followed by an aperitif will be organized at the Biarritz Athletic Club from 5.30pm to 7.30pm. The transfer by bus will be organized at 5.30pm from the Domaine de Françon. The conference dinner will be organized on Wednesday evening.



Monday 14th Nov.

12:00 *Registration and buffet*

13:50 *Welcome and introduction*

Session A.1 – Magnetism – Chair : Q. Faure

14:05 *“Magnetic fragmentation in pyrochlore iridates and ruthenates”*

E. Lhotel, Institut Néel, Grenoble, France

14:45 *“Neutron scattering panorama on ensembles of magnetic nanoparticles: magnetic order/disorder and collective excitations”*

L. Fernandez Barquin, CITIMAC, Santander, Spain

15:15 *“Magnetic excitation spectrum of the unconventional superconductor UTe₂”*

S. Raymond, CEA/IRIG, Grenoble, France

15:30 *“Study of magnetic epitaxial thin films using neutron diffraction”*

H. Himanshu, ILL and LNCMI, Grenoble, France

15:45 *“Spin dynamics seen by Inelastic Neutrons Scattering in an 1D Fe superconducting compound”*

A. Roll, Laboratoire Léon Brillouin, Saclay, France

16:00 *Coffee break*

Session B.1 - Soft matter – Chair : M. Plazanet

16:30 *“Small-angle scattering studies of polymer and filler structures”*

C. Genix, LCC, Montpellier, France

17:10 *“Collective effects in liquids: what scattering methods say and what it does not say”*

L. Noirez, LLB, Saclay, France

17:40 *“Controlled synthesis of gold nanoparticles in copolymers nano-molds by x-ray radiolysis: a coupled SANS/laboratory SAXS/synchrotron SAXS study”*

F. Cousin, LLB, Saclay, France

17:55 *“Decorating tunable self-assembled nanostructures with PEG for stealth applications”*

M. Almeida, ICPME, Thiais, France

18:10 *“Insights into the microscopic mechanisms responsible for phase separation in a biphasic acidic solution for metallic ion extraction”*

G. Meyer, LiPhy, Grenoble, France

18:25 *“Probing polymers adsorption under highly viscous flows using neutron reflectivity”*

L. Lafon, LPS, Orsay, France

18:40 *Poster session and welcome aperitif*

20:00 *Dinner*

Tuesday 15th Nov.

Session A.2 – From materials to magnetism – Chair: L. Fernandez-Barquin

9:00 *“Dynamically disordered solids across physical and chemical space”*

F. Fernandez Alonso, CFM, San Sebastian, Spain

9:40 *“Batteries / fuel cells- TBA ”*

S. Lyonnard, CEA/IRIG, Grenoble, France

10:10 *“Self-Organised Vortex Structures under the Influence of Current in Superconducting Niobium”*

R. Cubitt, ILL, Grenoble, France

10:25 *“Thermal conductivity of spinons in the 1D spin ½ cuprate SrCuO₂”*

O. Demortier, LLB, Saclay, France

10:40 *Coffee break*

Session C - SFN PhD Award - Chair : Denis Morineau

- 11:00 *Introduction*
11:15 **C. Alba-Simionesco**, LLB, Saclay, France – Chair of the 2022 SFN PhD award
11:45 **SFN PhD laureate**, France

12:15 *Lunch*

Session B.2 – Biology - Chair : F. Natali

- 14:00 *“Seeing the Chemistry in Biology”*
M. Blakeley, ILL, Grenoble, France
14:30 *“Time dependent kinetic measurements reveal a metastable intermediate phase during protein crystallization processes”*
C. Beck, ILL, Grenoble, France
14:45 *“Monitoring digestion of protein gels: Neutron Small Angle Scattering and Dark Field Imaging completed with SAXS”*
M. Napieraj, LLB, Saclay, France
15:00 *“Using polarisation analysis to compare the dynamics of protonated and per-deuterated samples of proteins”*
A. Nidriche, ILL-LiPhy, Grenoble, France

15:15 *Coffee break and poster session*

Session D – Instrumentation - Chair : F. Damay

- 15:45 *“MIRACLES, the time-of-flight backscattering spectrometer at the European Spallation Source”*
F. Villacorta, ESS Biblao, Spain
16:00 *“Wide Angle Polarization Analysis and first results with PASTIS-3 for IN20”*
U. Hansen, ILL, Grenoble, France
16:15 *“SAM, your future SANS instrument at the Institut Laue Langevin”*
N. Martin, LLB, Saclay, France
16:30 *“IN13+: current status and perspectives”*
F. Natali, ILL, Grenoble, France
16:45 *“Towards a new neutron source in France for materials science and industry.”*
F. Ott, LLB, Saclay, France

Session E - News from the facilities - Chair : P. Launois

- 17:00 *European Spallation Source*, **H. Schober**, ESS, Lund, Sweden
17:20 *Institut Laue Langevin*, **J. Jestin**, ILL, Grenoble, France
17:40 *Laboratoire Léon Brillouin*, **G. Chaboussant**, LLB, Saclay, France
18:00 *Fédération Française de la Neutronique*, **M. Plazanet**, 2FDN-LiPhy, Grenoble-Saclay, France

18:20 *Break*

Session F - Neutron Scattering Associations - Chair : A. Desmedt

- 18:30 *European Neutron Scattering Association*, **N. Malikova**, France
18:45 *Spanish Neutron Scattering Society SETN*, **M.T. Fernandez Diaz**, ILL, Grenoble, France
19:00 *General assembly of the French Neutron Scattering Society SFN*, **P. Launois**, LPS, Orsay, France
Rapport moral et financier
Election des nouveaux membres du Conseil d'administration - *Apéritif*

20:30 *Dinner*

Wednesday 16th Nov.

Session G1. Molecular Modelling, Optical and Neutron spectroscopies	Session H1. Diffraction at ESS
Chair: M. Dussauze	<u>Specific aspects of TOF neutron diffraction</u>
9:00 <i>“Resonant Inelastic X-rays Scattering: an emergent technique to probe spin-dynamics (and beyond) in quantum materials”</i> Q. Faure , ESRF, Grenoble, France	9:00 <i>“TOF powder neutron diffraction through the lens of quantum materials”</i> A. Gibbs (Inst. scientist HRPD @ ISIS)
9:30 <i>“Linear scaling Molecular Modelling - TBA”</i> D. Sanchez-Portal , CFM, San Sebastian, Spain	9:45 <i>“Theory of the process and some examples from the science done on SXD (and maybe WISH) at ISIS”</i> S. Capelli (Inst. scientist SXD @ ISIS)
10:00 <i>“Low-frequency lattice dynamics in lead halide hybrid perovskites”</i> B. Helen , LCC, Montpellier, France	

10:30 Coffee break and poster session

Chair: A. Desmedt	<u>Neutron diffraction at ESS: instruments, acquisition method and data format</u>
11:00 <i>“Atomistic simulation of disordered carbons: from structure to properties”</i> J.M. Leysalle , ISM, Bordeaux, France	10:40 <i>“Overview of Neutron Diffraction Instruments at ESS”</i> A. Jackson , ESS, Lund, Sweden
11:30 <i>“Endofullerenes: Dynamics in Confinement - CH4@C60 Study”</i> M. Aouane , ILL, Grenoble, France	11:00 <i>“DREAM: Neutron powder diffraction at the ESS”</i> M. Feygenson (Lead Scientist DREAM@ESS, ESS)
11:45 <i>“Hydrogen Storage and Dynamics in Clay Materials”</i> M. AbdelSater , LPS, Orsay, France	11:45 <i>“MAGiC: Polarized neutron diffraction at the ESS”</i> X. Fabreges (Lead Scientist MAGIC@ESS, LLB)
12:00 End	12:30 End

12:30 Lunch

14:00 Free afternoon

17:30 Bus departure from the “Domaine de Françon” to Biarritz Athletic Club.
Cesta Punta, Aperitif and Tapas.

20:00 Conference Diner and Party

Thursday 17th Nov.

Session G2. Molecular Modelling, Optical and Neutron spectroscopies	Session H2. Diffraction at ESS
<p>Chair: S. Sobanska</p> <p>9:00 <i>"Spectroscopy of cryo-matrices - TBA"</i> S. Coussan, PIIM, Marseille, France</p> <p>9:30 <i>"Surfactant-free microemulsions : how molecular dynamic reflects nano-structuration"</i> M. Plazanet, LiPhy, Grenoble, France</p> <p>10:00 <i>"Second order optical response in poled amorphous films: the singularity of thin films and new opportunities for integrated photonics"</i> L. Karam, ISM, Bordeaux, France</p>	<p><u>TOF diffraction data reduction</u></p> <p>9:00 <i>"Using mantid to analyze powder and single crystal data on WISH."</i> P. Manuel (Inst. scientist WISH @ ISIS)</p> <p>9:45 <i>"TOF data reduction using Scipp: Fast and flexible handling of event-mode data for time-resolved experiments"</i> S. Heybrock (Software Scientist, ESS)</p>

10:30 Coffee break and poster session

Chair: M. Jimenez	<u>TOF diffraction data analysis</u>
<p>11:00 <i>"Molecular simulations of clathrate hydrates: An overview"</i> A. Patt, CFM, san Sebastian, Spain</p> <p>11:30 <i>"Laboratory to field scale characterization of methane hydrate formation in clay-rich sediments using Raman Spectroscopy: study case of the Black Sea natural gas hydrate system"</i> A.C.C. Agnissan, IFREMER, Brest, France</p> <p>11:45 End</p>	<p>10:45 <i>"The CrysPy library for the analysis of time-of-flight polarized neutron diffraction data"</i> I. Kibalin (Postdoctoral fellow, LLB)</p> <p>11:30 <i>"EasyDiffraction, a new software for neutron diffraction data analysis"</i> A. Sazonov (Scientific Lead Developer for Diffraction, ESS)</p> <p>12:15 End</p>

12:00 Lunch box.

End of JDN2022.