



X-Ray and Neutron Science

5th ESRF/ILL International Student Summer Programme

2nd – 28th September 2018



Sunday, 2nd September – Arrival
 18:00 – 21:00 Welcome Buffet & Get Together with Tutors in the ESRF/ILL Cafeteria

| Monday, 3 rd September – Oral Sessions – ILL Chadwick Amphitheatre | | |
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| 08:00 – 09:00 | ILL students: Blood test | |
| 09:00 – 10:00 | ESRF students: Administrative formalities | ESRF CB office 424, L. Van Yzendoorn |
| 10:30 – 12:00 | ESRF Students: Safety training | ESRF, room BEL 1-01 |
| 09:00 – 12:00 | ILL students: Medical exam & administrative formalities | ILL 17, office 03, A. Schober |
| 12:00 – 14:00 | <i>Lunch break (common restaurant on site)</i> | |
| 14:00 – 15:00 | Welcome address and presentation of the ESRF | Francesco Sette (ESRF Director General) |
| 15:00 – 15:30 | <i>Coffee break</i> | |
| 15:30 – 16:30 | Welcome address and presentation of the ILL | Helmut Schober (ILL Director General) |

| Tuesday, 4 th September – Oral Sessions – ILL4 Seminar Room | | |
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| 09:00 – 10:00 | Neutrons and their Interaction with Matter (part 1) | Mark Johnson (ILL) |
| 10:00 – 10:30 | <i>Coffee Break</i> | |
| 10:30 – 11:30 | Neutron Production | Ulli Köster |
| 11:30 – 13:30 | <i>Lunch break</i> | |
| 13:30 – 14:30 | Neutrons and their Interaction with Matter (part 2) | Mark Johnson (ILL) |
| 14:30 – 15:00 | <i>Coffee break</i> | |
| 15:00 – 17:00 | ESRF Students: PSS Safety training ILL Students: Medical exams | ID31 (Belledonne) |

| Wednesday, 5 th September – Oral Sessions – ILL4 Seminar Room | | |
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| 09:00 – 10:00 | Principles of Synchrotron Radiation | Nicola Carmignani (ESRF) |
| 10:00 – 10:30 | Coffee break | |
| 10:30 – 11:30 | X-ray Instrumentation | Raymond Barrett (ESRF) |
| 11:30 – 14:00 | Lunch break | |
| 14:00 – 15:00 | X-rays and their Interaction with Matter (part 1) | Luigi Paolasini (ESRF) |
| 15:00 – 15:30 | Coffee break | |
| 15:30 – 16:30 | X-rays and their Interaction with Matter (part 2) | Luigi Paolasini (ESRF) |

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| Thursday, 6 th September – Laboratory work (project) | ILL Students Radioprotection safety training (morning), safety training (afternoon) |
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| Friday, 7 th September – Laboratory work (project) |
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| Monday, 10 th September – Oral Sessions - ILL Chadwick Amphitheatre | | |
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| 09:00 – 10:00 | Soft Matter Studies with Neutrons | Giovanna Fragneto (ILL) |
| 10:00 – 10:30 | Coffee break | |
| 10:30 – 11:30 | Soft Matter Studies with X-rays | Narayanan Theyencheri (ESRF) |
| 11:30 – 12:30 | Neutron Instrumentation | Eddy Lelièvre-Berna (ILL) |
| 12:30 – 12:30 | Lunch break | |
| Afternoon | Laboratory work (project) | |

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| Tuesday, 11 th September – Laboratory work (project) |
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| Wednesday, 12 th September – Oral morning session – ILL Chadwick Amphitheatre | | |
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| 09:00 – 10:00 | Neutron Diffraction | Juan Rodriguez (ILL) |
| 10:00 – 10:30 | Coffee break | |
| 10:30 – 11:30 | Magnetism and X-ray Dichroism | Andrei Rogalev (ESRF) |
| 11:30 - 12:30 | Lunch break | |
| Afternoon | Laboratory work (project) | |

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| Thursday, 13 th September – Laboratory work (project) |
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Sunday, 16th September – Hiking in the Vercors with Patrick Bruno (depending on weather conditions & your registrations)

Monday, 17th September – Oral morning session – ILL Chadwick Amphitheatre

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| 09:00 – 10:00 | Nuclear & Particle Physics | Olivier Zimmer (ILL) tbc |
| 10:00 – 10:30 | Coffee break | |
| 10:30 – 11:30 | X-ray Imaging | Alexander Rack (ESRF) |
| 11:30 | Lunch break | |
| Afternoon | Laboratory work (project) | |

Tuesday, 18th September – Laboratory work

Wednesday, 19th September – Oral morning session – ILL Chadwick Amphitheatre

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| 09:00 – 10:00 | X-ray Diffraction | Tobias Schulli (ESRF) |
| 10:00 – 10:30 | Coffee break | |
| 10:30 – 11:30 | Synchrotron Radiation and Structural Biology | Gordon Leonard (ESRF) |
| 11:30 | Lunch break | |
| Afternoon | Laboratory work (project) | |

Wednesday, 19th September, 18:30 – 21:30 – BBQ at the “Chalet” on Site

Thursday, 20th September – Laboratory work (project)

Friday, 21st September – Oral morning session – ILL4 Seminar Room

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| 09:00 – 10:00 | Fundamentals of X-Ray Absorption Fine Structure | Sakura Pascarelli (ESRF) |
| 10:00 – 10:30 | Coffee break | |
| 10:30 – 11:30 | X-ray Studies under Extreme Conditions | Mohamed Mezouar (ESRF) |
| 11:30 | Lunch break | |
| Afternoon | Laboratory work (project) | |

Monday, 24th September – Laboratory work (project)

| Tuesday, 25 th September – Oral morning session – ILL4 Seminar Room | | |
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| 09:00 – 10:00 | Neutron Spectroscopy | Andrew Wildes (ILL) |
| 10:00 – 10:30 | <i>Coffee break</i> | |
| 10:30 – 11:30 | Inelastic Neutron scattering | Mechthild Enderle (ILL) |
| 11:30 | <i>Lunch break</i> | |
| Afternoon | Laboratory work (project) | |

Wednesday, 26th September – Laboratory work (project)

| Thursday, 27 th September – Students' Workshop – ESRF Auditorium | | |
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| <i>Morning</i> | Laboratory work (project) | |
| <i>Session 1: chair Martin Böhm</i> | | |
| 13:45 – 14:00 | Welcome + Introduction | Patrick Bruno, ESRF |
| 14:00 – 14:15 | High pressure & temperature behavior of layered Cu(OH)F | Ida Bukalska, ESRF Adam Muckiewicz University in Poznań |
| 14:15 – 14:30 | Ab initio calculation of vanadyl phthalocyanine XMCD | Konstantin Lebedew, ESRF Southern Federal University |
| 14:30 – 14:45 | High Resolution X-Ray Absorption Spectroscopy in Materials Research | Siân Phillips, ESRF University of Liverpool |
| 14:45 – 15:00 | Acoustic Phonon Studies in TbFe ₃ (BO ₃) ₄ with Inelastic Neutron Scattering | Martin Jonák, ILL Heidelberg University |
| 15:00 – 15:15 | Changing of La _{0.7} Sr _{0.3} MnO _{3-x} thin film properties | Veronika Zorina, ESRF NRC Kurchatov Institute, Moscow |
| 15:15 – 15:45 | <i>Coffee break</i> | |
| <i>Session 2: chair Nico Carl</i> | | |
| 15:45 – 16:00 | Photo dissociation of I ₂ in a solvent | Gal Yosefi, ESRF Ben Gurion University of the Negev |
| 16:00 – 16:15 | Poly-NIPAm at the air-water interface | Ella Shilliday, ILL University of Bath |
| 16:15 – 16:30 | The evolution of spin-coated polymer films | Kelly Brouwer, ILL Utrecht University |
| 16:30 – 16:45 | Self-assembly of sugars and surfactants | Mikkel Christensen, ESRF University of Oslo |
| 16:45 – 17:00 | Controlling Self-Assembly with Light | Wenke Müller, ILL University of Potsdam |

Thursday, 27th September, 19:00 – Farewell Dinner in town

Friday, 28th September – Students' Workshop – ESRF Auditorium

Session 3: chair Eazhisai Kandiah

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| 09:00 – 09:15 | Fission studies at the ILL | Guillaume Häfner, ILL University of Cologne |
| 09:15 – 09:30 | Single-particle cryo-EM with β -galactosidase as a new benchmark sample for CMO1. | Jennifer Love, ESRF University of Bath |
| 09:30 – 09:45 | Luciferase Purification, Crystalization and Optical Spectroscopy | Laura Twomey, ESRF Universidad Politecnica de Madrid (UPM) |
| 09:45 – 10:00 | Monte Carlo Simulation for the Expected Radiation Doses Delivered to Mammalian Cells | Jack Bosley, ILL University of Bath |
| 10:00 – 10:15 | Characterisation of Gafchromic HD-V2 radiochromic film response uniformity using flatbed scanner | Aleksandra Wilk, ESRF AGH University of Science and Technology |
| 10:15 – 10:45 | <i>Coffee break</i> | |

Session 4: chair Robert Paddock

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| 10:45 – 11:00 | Diffraction for characterization | Guglielmo Albani, ILL Politecnico di Milano |
| 11:00 – 11:15 | Optimization of the calibration process of D19 | Matteo Mariani, ILL Università di Roma La Sapienza |
| 11:15 – 11:30 | Diffusion of triphenylphosphine on graphite | Sara Pia Marincek, ILL University of Ljubljana |
| 11:30 – 11:45 | Spectral Characterization of FCC catalysts for XRF computed tomography | Asma Mansouri, ESRF University of Geneva |
| 11:45 – 12:00 | Pressure effects on the thermal denaturation of Myoglobin | Antonio Calì, ILL Università degli Studi di Palermo |
| 12:00 – 12:15 | Closing remarks | Paul Steffens (ILL) |
| <i>Afternoon</i> | Departure formalities | |

Saturday, 29th September: Departure