

**Seventh Annual Niels Bohr International Academy Workshop on ESS  
Science: Deciphering the hidden dynamics of Soft Matter  
June 25-29, 2018**

(1) All participants can take part on the lectures, only the students (20) will take part on the hands on exercises.

(2) Problem solving sessions are scheduled on Monday, Tuesday and Wednesday. These sessions will be supervised. The results are presented on Thursday.

(3) "ESS Science: Opportunities & Ideas" session is intended to give the participants an opportunity to discuss on what they think is most important to develop a good neutron facility, including instrumentation, sample preparation laboratories, software, hardware, etc.

Time	Lecturer	Topic
<i>Monday, 1<sup>st</sup> day</i>		
8:45 am – 9:15 am	Registration	
9:15 am – 9:30 am	Poul Henrik Damgaard (Niels Bohr International Academy, Denmark)	<i>Welcome</i>
9:30 am-10:15 am	Juan Colmenero (Materials Physics Center (CSIC-UPV/EHU, Spain)	Polymers, neutrons & computers: a guided tour through the relaxation map of polymers
10:15 am-10:45 am	Coffee break	
10:45 am-11:30 am	Gerd Buntkowsky (Technische Universität Darmstadt, Germany)	Studying Soft-Matter-Dynamics with Solid State NMR Spectroscopy
11:30-12:00	Maria Paula Marques (University of Coimbra, Portugal)	Shining the Beam on Cells – In Search of Improved Anticancer Drugs
12:15 pm-1:30 pm	Lunch	
1:30 pm-2:15 pm	Mark Telling (ISIS Facility, UK)	Macromolecular dynamics: what can high energy resolution neutron spectroscopy tell us?

2:15 pm-3:00 pm	Loukas Petridis (ORNL, USA)	Molecular Simulation in Bioenergy
3:00 pm-3:30 pm	Coffee Break	
3:30 pm-5:00 pm	Students divided in two groups	<i>QENS tutorial exercises: data analysis &amp; MD</i>
<i>Tuesday, 2<sup>nd</sup> day</i>		
9:00 am-9:45 am	Clip presentation from the students	<i>Students give a 3 minutes presentation on their work</i>
9:45 am-10:30 am	Gerald Kneller (Centre de Biophysique Moléculaire, France)	New perspectives for interpreting quasielastic neutron scattering spectra
10:30 am-11:00 am	Coffee break	
11:00 am-11:45 am	Edina Rosta (Department of Chemistry, King's College London, UK)	Molecular Simulations of Enzyme Catalysis
11:45-12:30	Juergen Eckert (Texas Tech, USA)	This (peak) must be a C-C-OH deformation, or is it? Vibrational Spectroscopy has come of age thanks to computation
12:30 pm-2:00 pm	Lunch	
2:00 pm-5:00 pm	Students divided in two groups	Students chose project, hands on, data analysis, etc
6:30 pm-8:30 pm	Dinner for the invited speakers	
<i>Wednesday, 3<sup>rd</sup> day</i>		
9:00 am-9:45 am	Tommy Nylander (Lund University, Sweden)	The structure of lipid assemblies in bulk and at interfaces revealed by neutrons and X-rays
9:45 am-10:30 am	Murillo L. Martins (Pontifical Catholic University of Goiás, Brazil)	Using neutron scattering on medical research

10:30 am – 11:00 am	Coffee Break	
11:00 am – 12:00 pm	Andreas Schreyer (ESS, Sweden)	ESS Science: Opportunities & Ideas
12:00 pm -12:30 pm	Félix Jimenez-Villacorta (ESS-Bilbao, Spain)	MIRACLES – The time-of-flight backscattering spectrometer at the European Spallation Source
12:30 pm-2:00 pm	Lunch	
2:00 – 4:00	Student Working Groups & Round table discussions	
4:00 – 6:00 pm	Posters & Snacks	
<i>Thursday, 4<sup>th</sup> day</i>		
9:00 am-9:45 am	Emanuella Zaccarelli (Sapienza Università di Roma and CNR Institute of Complex Systems, Italy)	Slow dynamics in soft matter: insights from computer simulations
9:45 am-10:15 am	Felix Roosen-Runge (Lund University, Sweden)	Analytical modeling of complex and hierarchical dynamics
10:15 am-11:00am	Posters & Coffee break	
11:00am – 12:00 pm	2 Groups of Students (30 minutes each group)	Student presentations on their results
12:15 pm-2:00 pm	Lunch	
2:00 pm –	Guided to tour: <a href="https://designmuseum.dk/en/">https://designmuseum.dk/en/</a> Conference dinner at <a href="https://www.beghuset.com">https://www.beghuset.com</a>	
<i>Friday, last day</i>		
9:00 am-9:45 am	Sergey Kapishnikov (Copenhagen University, Denmark)	Multiple correlative X-ray microscopy study of the malaria parasites in human red blood cells

9:45 am-10:30 am	Ana R. Benetti (University of Copenhagen, Denmark)	Neutrons combined to X-rays in Dentistry
10:30 am – 11:00am	Posters & Coffee break	
11:15 am – 12:00 pm	Christiane Alba-Simionesco (LLB, France)	Thermodynamics of glass forming liquids by neutron scattering
12:00 pm-2:00 pm	Lunch and Good bye	