

# SCHOOL: NEUTRONS FOR MEMBRANE BIOPHYSICS

16.09.19 - 20.09.19, Garching, Germany

## MAIN TOPICS

- Small angle neutron scattering (SANS)
- Neutron reflectometry
- Grazing incidence small angle neutron scattering (GISANS)
- Membrane lamellar diffraction
- Molecular deuteration
- Molecular dynamics

## LECTURES

- Dr. Anna Leung (ESS)
- Dr. Selma Maric (MaxIV)
- Dr. Alexandros Koutsioumpas (JCNS @ MLZ)
- Dr. Sebastian Jaksch (JCNS)
- Dr. François Boué (INRA – AgroParisTech – Univ. Paris Saclay)
- Dr. Robert Georgii (TUM)
- Dr. Chris Garvey (Univ. Malmo, LINX)
- Dr. Thomas Hauß (HZB)
- Dr. Alan Mark (Univ. Queensland)

## ORGANISERS

- Dr. Chris Garvey (Univ. Malmo, LINX)
- Dr. Alexandros Koutsioumpas (JCNS @ MLZ)



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Register at [www.fz-juelich.de/jcns/SINE2020](http://www.fz-juelich.de/jcns/SINE2020)

The school will be an **international** meeting with contributions from leading neutron scattering and deuteration facilities. Together with contributions by academic researchers there is a great potential impact for neutron scattering over a diverse range of scientific problems.

We will focus on the three experimental techniques (**neutron reflectivity, neutron lamellar diffraction and small angle neutron scattering**) and the structural perspective that these techniques give on the arrangements of lipids into bilayers, the solubilisation of small molecules and interactions of larger biomolecules with lipid bilayers.

There will be hands on experience in producing good quality samples and the measurement and analysis of data on **world class neutron instrumentation**.

**Deuteration** is an indispensable adjunct to the structural perspective of neutron scattering which allows the experimentalist to highlight and resolve very specific molecular detail. An important aspect of this workshop is to provide a context for molecular deuteration from experts, well versed in the power, and importantly the limitations of the technique.

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