

# **MLZ User Meeting 2019**



**Tuesday, December 10, 2019 - Wednesday, December 11, 2019**

**Marriott**

## **Scientific Program**

While the first day will be dedicated to the MLZ Science Groups, the second day will present plenary talks dealing with relevant topics of neutron scattering and a poster session in the afternoon.

Just have a look at the topics below and submit your abstract: We are looking forward to receiving it!

## Materials Science

The session of the Materials Science Group will cover typical topics like metals, alloys, batteries, fuel cells, cultural heritage, and engineering. Two invited speakers, Pavel Strunz (High-temperature alloys) and Britta Schmutzler (Chlorine in restaurated objects), present an overview on their subjects. Contributions from fundamental research in materials science up to industry related applications are welcome.

## Soft Matter

The topic of this User Meeting of the Soft Matter Group focusses on "Structure and Dynamics of Biological Systems". This includes studies of biological relevant molecules, but also bio-mimicking systems. While structural investigations often are connected to the function, dynamics reveal many more details of the functionality not observable by methods other than neutron spectroscopy.

## Quantum Phenomena

For example, topics are high temperature superconductivity, quantum magnetism, novel quantum phenomena, correlated electrons, unconventional superconductivity...

## Structure Research

For example, topics are energy storage systems, ferroelectric and ferroic materials, shape memory alloys, magnetic mineralogy, protein crystallography...

## Neutron Methods

As main topic for the Neutron Method Group sessions we like to discuss experiments under high magnetic fields. Invited speaker Oleksandr Prokhnenko from the Helmholtz-Zentrum Berlin will share with us his experience at the Berlin HFM EXED instrument. Beyond this, contributions on neutron scattering methodical topics like neutron polarisation, advanced neutron guide and supermirror development, sample environment, and neutron detection are welcome.

## Nuclear, Particle, and Astrophysics

For example, topics are structure and nature of the weak interaction, unknown forces of nature at short distances, excess of matter versus antimatter in the universe...

## **Positrons**

The focused session of Physics with Positrons will cover all aspects of positron beam experiments in solid state and surface physics, materials science, and fundamental research. Current and planned developments of novel positron instrumentation will be presented as well.

## **Plenary**

This track is dedicated to the plenary talks on Wednesday morning.