

# Neutrino Scattering at Low and Intermediate Energies



**Monday, 26 June 2023 - Friday, 30 June 2023**

**Mainz Institute for Theoretical Physics, Johannes Gutenberg University**

## Scientific Programme

Presentations and discussions will address the following topics:

**Coherent elastic neutrino-nucleus scattering (CEvNS)**

Experimental status and outlook

Theoretical calculations (with uncertainty estimation) for relevant nuclear targets

Prospects for exotic physics searches with CEvNS, including the required precision

**Inelastic neutrino-nucleus reactions at tens-of-MeV**

State of experimental and theoretical approaches

Applications to supernova neutrino detection, etc.

Prospects for related electron beam measurements at the MESA accelerator

**Intermediate-energy neutrino scattering for oscillation experiments**

Nucleon knockout measurements, theory, and simulations

The role of ab initio calculations in guiding more approximate models

Possible electron-nucleus cross-section measurements using the MAMI beam: kinematical setups, observables, and targets

During the workshop we will be exploring how the unique facilities in Mainz may best be able to benefit the worldwide neutrino physics program.