# Frontiers of Matter Wave Optics

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March 20 - 26, Obergurgl, Austria

# Scope

The phenomenon of deBroglie waves evolved from textbook experiments on the foundations of quantum mechanics to a new kind of optics based on matter waves. Today, this field extends from experiments about the wave-particle dualism and decoherence, over coherent optics, non-linear optics, quantum atom optics and optics in periodic media to precision measurements. Tailoring waves of all kinds of matter and generation of complex matter-waves hold the promise of fascinating discoveries in this field over the next decade. The conference will bring together both high-ranking and junior scientists working at the frontiers of matter wave optics.

The conference is in part supported by the EuroQUASAR (European Quantum Standards and Metrology), a program within the EUROCORES (European Collaborative Research) scheme of the European Science Foundation (ESF). A special EuroQUASAR session will report on the creation of the so-called quantum standards and on the application of latest developments such as quantum metrology and novel techniques of quantum engineering.

# **Organizing Committee**

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