

Symposium Entanglement in Quantum Information, Condensed Matter and Gravity (SYQI)

jointly organized by
the Theoretical and Mathematical Physics Division (MP),
the Quantum Information Division (QI), and
the Low Temperature Physics Division (TT)

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Entanglement is one of the key features of quantum mechanics that make it genuinely different from classical physics. Recently, a number of new developments, both theoretical and experimental, have added a large number of new aspects and uses to entanglement. In particular, entanglement is at the heart of quantum information processing. The idea of this interdisciplinary workshop is to bring together experts from very different branches of physics who will elucidate each of these new developments, highlighting new aspects of entanglement research and how it creates astonishing new bridges between seemingly very different aspects of physics. New methods and concepts will be brought to the attention of different communities.

Overview of Invited Talks and Sessions

(Lecture hall H 0105)

Invited Talks

SYQI 1.1	Wed	15:00–15:30	H 0105	The Quantum Internet: Concepts, Challenges and Progress — •RONALD HANSON
SYQI 1.2	Wed	15:30–16:00	H 0105	Strange metals - A platform to study entanglement in condensed matter? — •SILKE PASCHEN
SYQI 1.3	Wed	16:00–16:30	H 0105	Quantum black holes may not have interiors — •VIJAY BALASUBRAMANIAN
SYQI 1.4	Wed	16:30–17:00	H 0105	Gauge Symmetry-Resolved Entanglement in Lattice Gauge Theories: A Tensor Network Approach — NOA FELDMAN, JOHANNES KNAUTE, EREZ ZOHAR, •MOSHE GOLDSTEIN
SYQI 1.5	Wed	17:00–17:30	H 0105	Parameter estimation of gravitational waves with a quantum metropolis algorithm — •MIGUEL ANGEL MARTIN - DELGADO

Sessions

SYQI 1.1–1.5	Wed	15:00–17:30	H 0105	Entanglement in quantum information, condensed matter and gravity
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