Intersectional Symposium Many-Body Physics of Model Systems and Real Materials (SYMB)

lead by the Quantum Optics and Photonics Division (Q)

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Many-body physics is encountered in various experimental platforms. While solid-state systems offer the chance to develop new materials and applications, artificial quantum systems such as ultracold atomic gases can be used to investigate fundamental many-body effects in a controlled environment. The symposium combines speakers from both scientific communities. With an exemplary selection of state-of-the-art research in experiment and theory, the symposium aims at fostering the mutual exchange between the fields and highlights how both fields can benefit from each other.

Overview of Invited Talks and Sessions

Invited Talks

SYMB 1.1	Thu	14:30–15:00	HSZ 01	**Synthetic Quantum Many-Body Systems** — •Tilman Esslinger
SYMB 1.2	Thu	15:00–15:30	HSZ 01	**Unconventional quantum phases in quantum magnetism and cold atoms** — •Frederic Mila
SYMB 1.3	Thu	15:30–16:00	HSZ 01	**Exploring the physics of disorder with Bose-Einstein condensates** — •Giovanni Modugno
SYMB 1.4	Thu	16:00–16:30	HSZ 01	**Influence of randomness on the Mott transition in the organic molecular conductors** — •Takahiko Sasaki
SYMB 1.5	Thu	16:30–17:00	HSZ 01	**Unconventional superconductivity in strongly correlated materials** — •Jörg Schmalian

Sessions

SYMB 1.1–1.5	Thu	14:30–17:00	HSZ 01	**Many-Body Physics of Model Systems and Real Materials**