Symposium Frontiers of Nanomechanics (SYNM)

jointly organized by
the Low Temperature Physics Division (TT),
the Dynamics and Statical Physics Division (DY), and
the Semiconductor Physics Division (HL)

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Nanomechanical systems are receiving strong attention because of their potential both in terms of fundamental quantum physics and for applications such as ultrasensitive detection of small masses, forces and displacements, and as a method for transferring and manipulating quantum information. This symposium highlights recent experimental results at the forefront of international research, including coupling to a superconducting qubit, to microwave resonators, and to the optical radiation field.

Overview of Invited Talks and Sessions

(lecture room H 0105)

Invited Talks

SYNM 1.1	Wed	15:00–15:30	H 0105	**Mechanical resonators in the quantum regime** — •Andrew N. Cleland
SYNM 1.2	Wed	15:30–16:00	H 0105	**Quantum optomechanics: exploring the interface between quantum physics and gravity** — •Markus Aspelmeyer
SYNM 1.3	Wed	16:00–16:30	H 0105	**Integrated transduction and coherent control of high Q nanomechanical systems using dielectric gradient forces** — •Eva M. Weig
SYNM 1.4	Wed	16:30–17:00	H 0105	**Cavity optomechanics with microwave photons** — •John Teufel
SYNM 1.5	Wed	17:00–17:30	H 0105	**Optomechanical crystals** — •Oskar Painter

Sessions

SYNM 1.1–1.5	Wed	15:00–17:30	H 0105	**Frontiers of Nanomechanics**