

Session Program

23-25 Sept 2026



Optomechanical Sensing for Subatomic and Astroparticle Physics

Levitated Sensors

Thursday 24 September

10:15

Levitated Sensors: I - Levitated Optomechanics

Session | **Location:** Donald Gordon Hotel and Conference Centre 421 Union St., Kingston, Ontario, Canada | **Convener:** Joseph Formaggio

10:15-10:55

Optomechanical sensors for gravity, dark matter, and axions: levitated tests of quantum gravity and high-frequency gravitational-wave searches

Speaker

Andrew Geraci

10:55-11:35

Gravitational-wave response of optically levitated sensors in Fabry-Pérot cavities: relativistic derivation and the input-mirror asymmetry

Speaker

Andrew Laeuger

11:35-12:15

A quantum-limited levitated force and recoil sensor: minimum-uncertainty nanoparticle states and sub-zero-point recoil detection

Speaker

Massimiliano Rossi

12:15

13:30

Levitated Sensors: II

Session | **Location:** Donald Gordon Hotel and Conference Centre 421 Union St., Kingston, Ontario, Canada | **Convener:** David Moore

13:30-14:10

Low-noise levitated oscillators and calorimetry with levitated superconductors: chip-based magnetic traps and single nuclear-decay energy measurement

Speaker

Thomas Penny

14:10-14:50

Magnetomechanics and levitation: laser-free Paul-trapped micromagnets coupled to superconducting circuits for quantum state preparation

Speaker

Mathieu Juan

14:50