

GRAvitational-waves Science&technology Symposium (GRASS 2026)



Monday, 22 June 2026 - Wednesday, 24 June 2026

Palazzo Moroni, Padova

Scientific Program

Advanced optical coatings and materials

Crystalline and cryogenic coatings, substrates and suspension components. Challenges in materials and metrology for ground- and space-based GW detectors.

Invited speaker: **Frances Hellman**, University of California, Berkeley (USA)

Title: *Thermal noise in mirror coatings: present status and future prospects*

Modelling and mitigation of stray light noise

Straylight modelling, characterisation and mitigation tools for ground- and space-based GW detectors.

Invited speaker: **Lionel Clermont**, University of Liège (Belgium).

Title: *Time-of-Flight Stray Light Diagnostics for Characterization and Mitigation in Ultra-Sensitive Optical Systems*

Quantum Noise Reduction

New ideas and challenges in quantum noise reduction systems. New approaches to quantum noise.

Invited Speaker: **Victoria Xu**, University of California, Berkeley (USA)

Title: *"New ideas and challenges for quantum noise reduction. New approaches to quantum noise shaping"*.

Machine learning in gravitational wave detectors

Applications of Machine Learning to experimental techniques for GW detectors.

Invited Speaker: **Nikhil Mukund**, Massachusetts Institute of Technology (USA)

Other challenges for future GW detectors

General aspects of gravitational-wave physics or detection that do not explicitly fall within the scope of the other topical sessions.

