



Quantum metrology, sensing and communication at INRIM

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Abstract

INRIM is the Italian institute devoted to metrology within the International Convention of the Meter. The development and the deployment worldwide of quantum standards is among its core activities, both in fundamental research and services.

The Quantum Metrology Division is deeply committed to new standards, new measurements, and new devices. In particular, in recent years three relevant trends are emerging. First, in the frame of the European Quantum Communication Infrastructure, INRIM is active with the Italian Quantum Backbone research infrastructure and the QKD testing and validation activities; second, the miniaturization trends (also in metrology but not only) led to the new research infrastructure Piquet for quantum, micro and nano devices; third, a growing engagement in the aerospace sector, from Galileo to the new quantum challenges.

The talk will describe INRIM achievements and perspectives on these three challenges.

The seminar is in presence up to the maximum occupancy of the lecture hall.