18th International Workshop on Low Temperature Detectors (LTD-18)

Sunday 21 July 2019 - Friday 26 July 2019

Milano

Scientific Programme

The International Workshop on Low Temperature Detectors (LTD) is held every two years and represents the preferred meeting to present the latest developments, the applications and the status and results of the main scientific experiences using low temperature detectors.

The rapid technical developments of the last years and their outstanding features make these detectors very attractive in a variety of fields ranging from fundamental research to applied sciences.

Low Temperature Detector Development and Physics

Transition-edge sensor (TES), Metallic Magnetic Calorimeters (MMCs), Microwave Kinetic Inductance Detectors (MKIDs), Nanowire, Si and Ge thermistors, Superconducting Tunnel Junction (STJ), Hybrid detectors, other and novel devices

Detector readout, signal processing, and related technologies

Multiplexing, SQUIDs, Amplifiers, Parametric amplifiers, Microwave electronics, Filtering, Data Acquisition, Digital signal processing, Data modeling and statistical analysis, Refrigeration, Noise reduction, Cryogenfree refrigeration, Space cryogenics, Calibration

Low Temperature Detector fabrication techniques and materials

Device microfabrication, MEMs, Pixels engineering, Array engineering, Antennas, Wiring, New materials, Low activity materials

Low Temperature Detector Applications

Dark Matter, Neutrino and Rare event searches, Astrophysics and cosmology (mm-wave, THz, IR, Visible, X-ray, Gamma-ray), Nuclear and Particle Physics, Material analysis, Homeland security, Cultural Heritage, Life Science

Low Temperature Detector for quantum technologies and other frontiers

Quantum Communication and Cryptography, Qubits, Quantum Computing, Quantum Sensing, Single photon detection

Technology transfer, outreach, and dissemination

Commercial analytical instrumentation, Industrial and commercial applications, Transfer and integration of knowledge, Spin-offs and public engagement