

NANO COLLOQUIA 2023 - S3 SEMINAR

Ask not what your TEM can do for you – ask what you can do for your TEM: Join us on an "all-you-can-eat" tour into TEM, featuring phonon spectroscopy, artificial intelligence, femtosecond, and quantum microscopy.

Thursday April 6, 2023 – 11:00

ON-SITE - S3 Seminar Room, Third Floor, Physics Building

ONLINE - <https://tinyurl.com/VincenzoGrillo>

Speaker

Vincenzo Grillo - CNR Nano S3

Abstract

Electron microscopy is probably the characterisation technique that has made the largest technical progress in the past 20 years. A transmission Electron Microscope has the technology of a miniature accelerator, the potentiality of an electron optical bench, the best imaging possibility in terms of real space resolution and the possibility to probe electromagnetic absorption with meV resolution in a continuous range of energy from meV to KeV. Moreover recent progress is pushing in the direction of femto- or even atto-second resolution in pump and probe experiments and exploring the quantum nature of electrons with phenomena like electron-electron and electron-photon correlation and entanglement.

I will touch upon many of these topics to give a very broad overview of all these progresses.

While having in mind the (hoped) instrumental developments of the group, the ambition of this talk is to highlight some of the possible directions that the TEM group will take along the "nearest neighbor" collaborators and to seek for possible synergies with other experimental and theory groups in the institute.

The seminar is realized in the framework of the funded projects:

[Smart Electron Grant Agreement No. 964591](#)

Host: Massimo Rontani segreteria.s3@nano.cnr.it