

## **ANNUNCIO DI SEMINARIO**

**Mercoledì 19 luglio 2023 – 11:00**

Sala Conferenze dell'Istituto IMEM, Parma

### **The development of X-ray Detectors at STFC**

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The Science and Technology Facilities Council is one of seven research council that form UK Research and Innovation. The Detector & Electronics Division based at the Rutherford Appleton Laboratory develop a range of radiation detectors for the broad range of science covered by STFC. This includes X-ray detectors for synchrotron and laser driven radiation sources, neutron and muon detectors for the ISIS facility and instrumentation for space science. The work spans the full technology readiness levels from investigating new detector materials, delivering instruments to science facilities, and translating the detectors to industry. A summary of the capabilities and test facilities available to the research community will be presented.

The main part of the talk will focus on the development, performance, and applications of X-ray detectors at STFC. This includes:

- the development and deployment of Cd(Zn)Te detectors for hard X-ray spectroscopic imaging with the HEXITEC and newly developed HEXITEC MHz detectors;
- an introduction to DynamiX, a new 65nm CMOS based ASIC using charge cancellation and high frames rates to meet the demands of diffraction limited storage ring synchrotrons will also be presented;
- a summary of ongoing development work in novel detectors such as LGADs, Perovskites and other detector materials.