



University of Pavia

**Ph.D. School of Electrical and Electronics Engineering and Computer Science
Ph.D. School in Microelectronics**

Radiation Detectors: Imaging What You Cannot See

Cinzia Da Vià
University of Manchester, UK

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Aula Seminari ex-Dipartimento di Elettronica, Piano D

Abstract: Radiation instrumentation has played a fundamental role in nuclear and particle physics discoveries as well as in life saving medical and biological imaging and other fields since more than a century. The presentation will review the historic progression of radiation detectors and imaging technologies in correlation with key physics discoveries. Special emphasis will be given on more recent silicon detectors and their application in the large experiments at the CERN Large Hadron Collider and in other fields like Space, Environment, Biology and Medicine. Finally, a review on future detector developments will be explored.

Bio: Cinzia Da Vià is a Professor of Physics at the University of Manchester UK, and currently a visiting Professor at Stony Brook University USA. She is an expert in innovative radiation detectors for High- Energy Physics and Medical applications, the founder and leader of the 3D ATLAS pixel R&D Collaboration (2007-2014), which successfully designed and industrialized the first 3D sensors using micro-fabrication to be installed in an experiment. 3D sensors are operating in the ATLAS experiment since 2014 and are the radiation hardest silicon sensors ever fabricated. She is currently involved 3D printed dosimetry and vertical integration of smart-systems. She is in the scientific committee of several international conferences on Radiation Detectors and Instrumentation and is one of the founders of the ERDIT (European Radiation Detector and Imaging Technology) Network to promote Radiation Imaging Technology research across different fields of application in Europe. She is a member of IEEE Nuclear and Plasma Society (NPSS) Trans National Committee (TNC) representing the United Kingdom and the Nuclear Science Symposium (NSS) Chair 2019. A former elected member of the IEEE Nuclear Plasma Science Society (NPSS) Radiation Instrumentation Technical Committee (RISC) she is currently part of the IEEE Women in Engineering Committee as Liaison to NPSS.

Organizer

Prof. Lodovico Ratti

Ph.D. Coordinators

Proff. Torelli and Di Barba

The seminar will take place in English
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