# Seminar

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## *EXPERIMENTAL POSSIBILITIES WITH ION BEAMS AT CMAM*

**Wednesday, 02 July 2025, h. 11.00**

**Wataghin Room, Physics department, via Pietro Giuria 1, Torino**

***Abstract***:
CMAM provides ion beams for wide variety of atomic species at energies in the MeV range, with a portfolio of six beamlines for analysis and modification of materials at the nanoscale and for other applications in different areas. The seminar will expose the rationale of the center, describe the accelerator and beamlines, briefly address analysis and materials modification techniques, and give some illustrative scientific examples. Since 2024 the facility incorporates the possibility of delivering light ion pulsed beams, as a novel tool for science applications. Two lines of activity will be stressed in particular: experiments studying and exploiting the properties of diamond as a key technological material and radiobiology experiment plans and modeling efforts to help understand the so-called FLASH effect in proton therapy.

## Biography

Degree in Physics (UAM, 1996) and Mathematics (UAM, 2001) PhD in Physics (UAM, 2000)

Experience: CMAM 2000-06 (coordinator of technical team, then deputy director); ALBA synchrotron light source 2006-19 (installation project coordinator, then acting director, then deputy director); CMAM director since January 2020 (CMAM is an ion beam facility located at Universidad Autónoma Madrid)

Wide experience in management of Research Infrastructures, leading multidisciplinary teams and strategic planning.

Represents Spain as advisor in the ESRF Council (European Synchrotron Radiation Facility); Editor in chief of European Physics Journal Plus.

Started his career in the field of High Energy Physics, then moved into Materials Science based on the usage of particle accelerators, with particular emphasis on radiation damage.

Involved in a large number of projects, publications and conferences. Strongly engaged in outreach activities and projects.