



UNIVERSITÀ
di **VERONA**

Scuola di Dottorato
di **SCIENZE NATURALI E
INGEGNERISTICHE**

Corso di Dottorato in Nanoscienze e tecnologie
avanzate

PhD Course on “Physical Methods for Nanostructured Materials Characterization”

Prof. Fernando Lázaro Freire Junior

Pontifícia Universidade Católica do Rio de Janeiro - PUC-Rio

In this course we shall present to PhD students of the School of Natural Sciences and Engineering the basic physical processes and some experimental techniques used for electronic and nuclear characterization of materials, as well as some examples of their application to nanostructured systems.

Class Meeting

15.2.2017 – 10.00/12.00 Sala Verde

Interaction of radiation with matter

Principles of the Scanning Electron Microscopy and Microanalysis

22.2.2017- 10.00/12.00 Sala Verde

Scanning Probe Microscopy: AFM, STM and SNOM

01.3.2017 - 10.00/12.00 Sala Verde

Surface characterization: AES, XPS and UPS; Surface Enhanced Raman spectroscopy (SERS)

7.3.2017 - 10.00/12.00 Sala Verde

Ion beam Techniques: Time of Flight Secondary Ion Mass Spectrometry, Low Energy Ion Scattering Spectroscopy, Nuclear Techniques: RBS and PIXE for trace elements detection analysis.