

Course offered for the STAT PhD program starting from a.y. 2019/2020

TITLE	Advanced Scanning Probe Microscope
Lecturer	Paolo Facci
Duration and Credits	8 hours – 2 CFU
Course description	Scanning probe techniques in Surface Science and related fields are to date well established approaches to sample characterization, all the way down to atomic resolution level. Taking advantage of different chemical-physical observables (force, electric current, electric potential, light), that can be measured as a result of the interaction of a tiny probe with a surface in the so called near-field regime, a remarkable variety of sample parameters (topography, surface charge, mechanical properties, local friction, local adhesion, surface potential, heterogeneous electron transfer and many more) can be assessed. Details as minute as the probe tip can be disclosed in samples of different nature and under different environmental conditions. Single molecules and single atoms can be image, characterized, and manipulated at will using these instruments that configure genuine nanotools and nanometer resolution microscopes.
Course organization	
Teaching period	