



UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Electronic Excitations in Materials and in Nanostructures: theoretical methods, algorithms and computer tools

2122-79R-M3

Title

Electronic excitations in materials and in nanostructures: theoretical methods, algorithms and computer tools

Teacher(s)

Prof. Silvana Botti, Friedrich-Schiller Universität Jena,
Institut für Festkörpertheorie und optik, Germany

Language

English

Short description

1. Introduction to theoretical spectroscopy: the microscopic-macroscopic connection
2. Density Functional Theory
3. Linear response theory

4. Introduction to Green's functions
5. The GW approximation
6. Bethe-Salpeter equation
7. Time-dependent density functional theory
8. Excitonic effects in solids
9. Applications to real materials

CFU / Hours

1 CFU/ 8 hours

Teaching period

2022: from March 7 to March 11 (14.30-16.30).

UPDATE: COURSE IS POSTPONED. IT WILL LIKELY TAKE PLACE FROM JULY 4th to JULY 8 BUT WAIT FOR FINAL CONFIRMATION
