



UPO

UNIVERSITÀ DEL PIEMONTE ORIENTALE
DIPARTIMENTO DI SCIENZE E INNOVAZIONE TECNOLOGICA

EVENTI DiSIT

Seminario | Seminar

30-05-2024

14:30-15:30

Aula 302

Field-cycling NMR relaxometry of diamagnetic and paramagnetic systems

[Prof. Giacomo Parigi](#)

Università degli Studi di Firenze



Fast field cycling relaxometry measurements, also called nuclear magnetic relaxation dispersion (NMRD) profiles, report on the nuclear longitudinal relaxation rates as a function of the applied magnetic field over 4 orders of magnitude. These measurements provide a direct access to spectral density functions, so that information on molecular structure and dynamics of macromolecules in solution can be monitored. Relaxometry profiles can directly inform on the presence of motions occurring on time scales from nanoseconds to microseconds, thus allowing for the detection of reorientation times of proteins from a few kDa up to MDa. ^1H NMRD profiles are also very useful for the characterization of paramagnetic molecules, especially in the field of the development of contrast agents for MRI. The interaction of paramagnetic complexes with macromolecules present in biological systems can in fact cause an increase of the paramagnetic relaxivity, which in turn increases the MRI contrast.

EVENTO APERTO A:

Docenti | Teachers, Borsisti | Research Fellows, Assegnisti | Postdoctoral researchers, Dottorandi | PhD students, Studenti | Students

SEMINARIO IN LINGUA: Inglese

