Venerdì 11 luglio 2025
alle ore 11.30

presso AULA 1 Marconi dell'Edificio F
Area della Ricerca CNR di Firenze
Via Madonna del Piano 10, Sesto Fiorentino (FI)

il prof. Samer Gozem
Georgia State University
Atlanta, GA, United States

terrà il seguente seminario:

" Electrostatic Tuning of LOV Domain Photophysics "

Si invitano tutti gli interessati a partecipare.

Dr. Silvia Rinaldi
Ricercatrice ICCOM

Dr. Claudio Sangregorio
Direttore ICCOM

Short Abstract:

Flavin's spectroscopic, photophysical, and redox properties are sensitive to its interactions with neighboring polar or charged groups. Flavoproteins capitalize on this sensitivity to tune the chemical reactivity and photochemistry of flavin. A fundamental understanding of this tuning mechanism is necessary for the design of novel flavoproteins. Photoactive flavoproteins such as Light-Oxygen-Voltage (LOV) domains have served as important scaffolds to tune photophysics through amino acid mutations, resulting in a series of engineered LOV-based proteins that optimize fluorescence, intersystem crossing (ISC), photoreduction, and/or adduct formation over a range of timescales. To better guide future engineering efforts, we have recently employed hybrid quantum mechanical / molecular mechanical (QM/MM) models of LOV domains to study how intradomain electrostatics exert control over flavin's early photophysics.

Biographic sketch:

Samer Gozem is an Associate Professor of Chemistry and Director of Graduate Studies at Georgia State University. He obtained his B.Sc. in Chemistry in 2008 from the American University of Beirut in Lebanon and his Ph.D. in Photochemical Sciences in 2013 at Bowling Green State University. He then carried out postdoctoral training at the University of Southern California before joining Georgia State University as a faculty member in 2017. His research interests include using classical and quantum mechanics to study light-responsive chemical and biological systems.