**Prof. Luciano De Sio**

Department of Sciences and Biotechnology Medical-Surgical**, Sapienza University of Rome, Italy**

**Green nanoscale biophotonics: from real-time biosensing to photo-thermal therapy**

**Short Abstract:** Nanotechnology and nanomaterials play a crucial role in modern and cross-disciplinary science thanks to the capability to monitor and manipulate biomaterials at the nanoscale. In this framework, gold nanoparticles have gained significant attention thanks to their unique thermo-optical and spectroscopic properties. In this talk, I present and discuss the latest achievements in plasmonic-assisted biomedical applications. From environmental biosensing to cancer therapy, a new generation of "green" and biophotonic applications are reported and discussed.