***Keynote speaker (20+3 min)**:*

Prof. Alberto Rainer
Università Campus Bio-Medico di Roma

Micro & nanofabrication for biomedicine and One Health

Micro- and nanofabrication technologies serve as pivotal enablers across a wide range of application domains. In this presentation, I will highlight selected case studies within the biomedical and One Health frameworks. Microfabrication, in particular, has proven instrumental in transitioning nanomaterial synthesis from traditional batch processes to more efficient continuous-flow systems. For instance, our research group has developed comprehensive libraries of formulated nanogels, designed as nanocarriers for targeted drug delivery applications. Another significant area of impact is the development of advanced in vitro models. Our team has contributed to the creation of disease models for various organs, including the liver and the intestinal barrier. More recently, leveraging this expertise within a One Health perspective, we have established an in vitro model of Tursiops truncatus dermis to support marine ecotoxicology research. Our work is funded by the EU, NextGenerationEU – M6C2 PNRR-POC-2023 (12377415) and M4C2 PRIN 2022 PNRR (P2022WENKB).