

Chiara SCOGNAMIGLIO - CV

Dr Chiara Scognamiglio is a research scientist graduated in Mechanical Engineering (BSc) and Nanobiotechnologies (MSc) at University of Rome La Sapienza. In 2014, She joined the Institut de Physique de Nice (InPhyNi) for a PhD thesis in co-tutel with the Department of Mechanical Engineering of La Sapienza (DIMA) on cavitation in biomimetic systems. At InPhyNi, She developed a novel hydrogel sensor inspired by fern plants, where water evaporation triggers bubble nucleation resulting in an avalanche-like cavitation event. At DIMA, She used a numerical approach to evaluate the acoustic signature of a confined cavitation bubble and explore fluid dynamics at small spatiotemporal scale, inaccessible with available experimental methods. During her stay in Rome, She carried out her experimental work at Center for Life Nano- and Neuro-Science (CL2NS), where She realized a human vessel-on-chip to quantify the permeability of the endothelial barrier under the effect of acoustic cavitation. She is currently a postdoc researcher at CLNS carrying out interdisciplinary projects at the intersection between engineering, biology and physics focusing on the fabrication of biomimetic systems. In particular, She works on the development of a cutting-edge technology pairing microfluidics and extrusion bioprinting to create 3D human functional tissue substitutes for disease modelling (*i.e.*, cancer) and regenerative medicine (*i.e.*, bone regeneration).