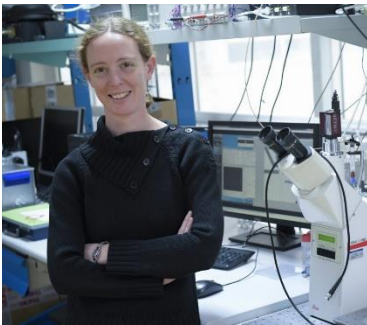


## Closed-loop control of electrical actuation inside microfluidic chips

Mercoledì 8 marzo, ore 16:00, Aula B7, Macroarea di Ingegneria, Università di Roma "Tor Vergata"



**Dr. Aude Bolopion, CNRS Researcher, Femto-ST Institute (FR)**

**Brief Bio:** Aude Bolopion received the Ph.D. degree in robotics from Sorbonne University, Paris, France, in 2010. She was a member of the Institute for Intelligent Systems and Robotics, Paris. Her research interests are focused on microrobotics and micromanipulation. She became a CNRS Researcher with the FEMTO-ST Institute, Besançon, France, in 2011. Dr. Bolopion received the CNRS bronze medal in 2019 for her work on noncontact actuation for microrobotics.

**Abstract:** Electric fields, and particularly dielectrophoresis effects, are widely used to move biological objects inside fluidic chips. However, they are most of the time used in a passive way. A given field is applied, and biological objects react differently depending on their properties. We propose here to investigate another approach, inspired from robotics control laws. The electric field is modified in real time to apply a desired force on the objects, independently of their properties. Precise trajectory control can be achieved, having applications on the measurement of cell interactions.