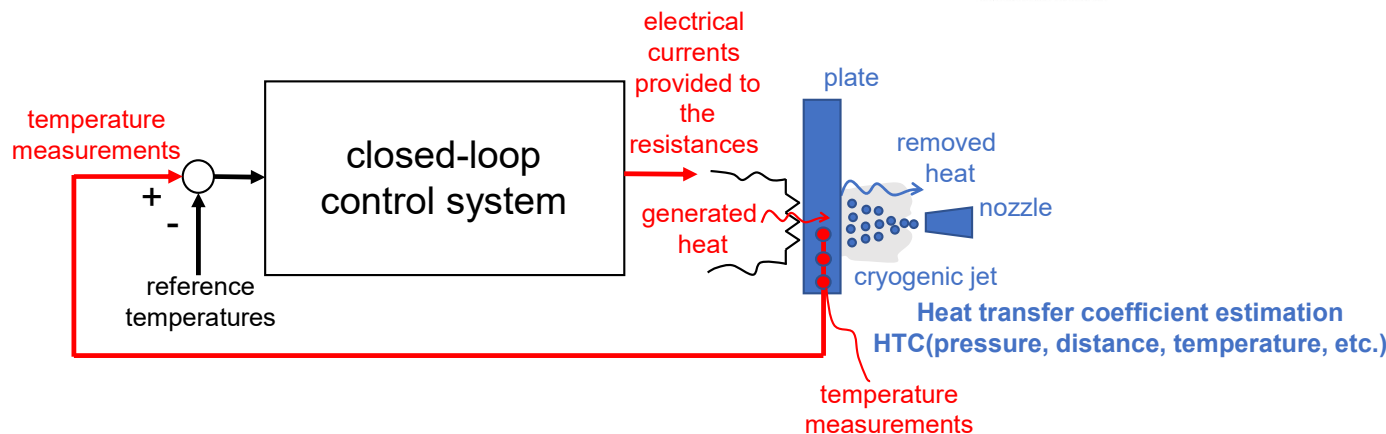
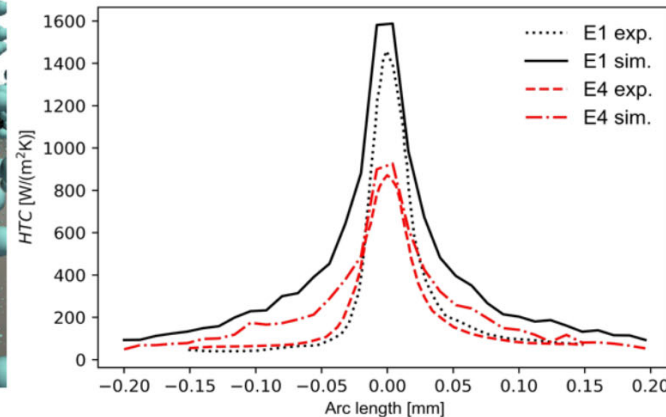
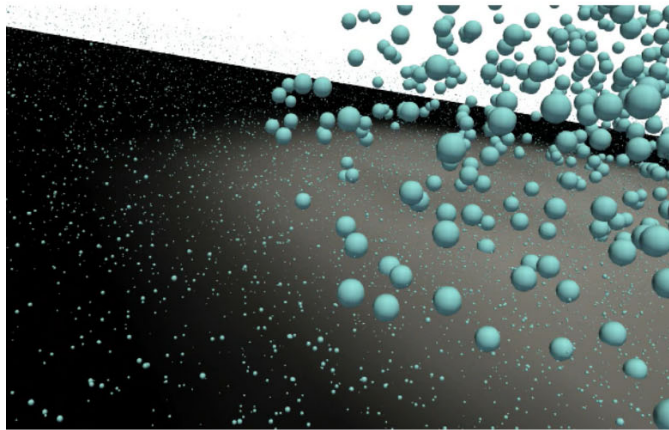


## Experimental identification of heat transfer coefficient in cryogenic jet impingement



### Thesis goal:

In many industrial applications fluids / gases are used for cooling (for example cryogenic fluids) but in many cases the heat exchange coefficients useful for designing the various applications are not known. The goal of the thesis is to conceive, develop and design a sensorized system for the characterization of the heat exchange between a fluid and a surface as a function of some parameters (temperature, pressure, etc.). The project foresees that the candidate evaluates different alternatives in terms of design solutions, choice of sensors, choice of the control system and takes care of the first phases of realization / characterization of the prototype. Modelling and experimental activities are both expected.

### References:

- Golda, P., Lettner, N., Schießl, R., & Maas, U. (2021). Experimental investigation of the cryogenic LN<sub>2</sub>-cooling performance for an impinging jet configuration for different inflow conditions. *International Journal of Heat and Mass Transfer*, 180, 121776. <https://doi.org/10.1016/J.IJHEATMASSTRANSFER.2021.121776>