



Graduate School Event

Thesis Defense: The morphology underneath a levitated hydrogel sphere

Vicente Luis Diaz Melian (Waitukaitis Group)

Waitukaitis Group

Host: Kimberly Modic

When a Leidenfrost droplet floats on its own vapor layer, the interplay between vapor pressure, surface tension, and gravity determines its shape, and in the stable regime the underside of the droplet exhibits curvature inversion. Using interferometric imaging, we observe a different behavior for a levitated hydrogel sphere. Curvature inversion appears briefly after deposition, but the continuous vaporization process removes this feature, leading first to an oscillatory regime and eventually to a steady state without curvature inversion. We demonstrate the essential role of vaporization in shaping the hydrogel underbelly, where direct mass loss has a stronger influence than the balance between vapor pressure and elastic forces.

Thursday, August 13, 2026 02:15pm - 03:15pm

Central Bldg / O1 / Lecture Hall (I02.O1.014) and Zoom



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.

Please find a schedule of the ISTA Shuttle on our webpage:

<https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.