Training for Early Stage Researchers

The LubISS network offers a unique training platform for 15 Early Stage Researchers (PhD students or Postdocs) in a multidisciplinary research endeavour of great technological, industrial and environmental importance.

Please find further information about the project on our home page:

www.lubiss.eu

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LubISS
Lubricant Impregnated Slippery Surfaces

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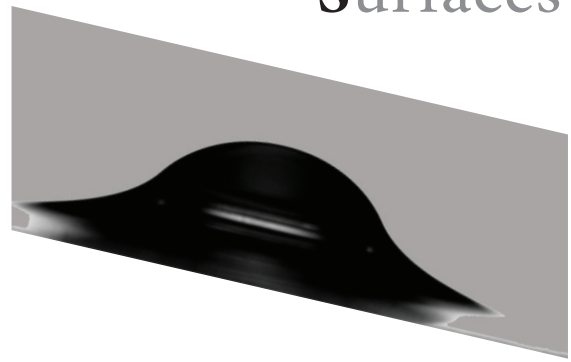

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Project

Textured substrates which are infiltrated with a lubricant form a new class of functional surfaces, referred to as Lubricant Impregnated Slippery Surfaces (LubISS). Texture is decisive for capillary forces to retain the lubricant in place: a distinctive feature of LubISS is that (water) droplets, ice crystals and microorganisms slide off these surfaces very easily. Capillary forces also bring about a so-called annular wetting ridge which surrounds liquid droplets and solid particles. However the latter influences the properties of resting and moving droplets and can drag lubricant along. Depending on the dominant interactions and forces, droplets can even be cloaked by a thin layer of lubricant.

In order to design durable and environmentally friendly LubISS, our network strives to understand the interplay between the physical- and chemical interactions between the surface topography, the lubricating film and the droplet under both static and flow conditions.

The complementary expertise of 9 world-class academic and industrial partners from 6 European countries provides state-of-the-art facilities in

- fabrication of well-defined structures,
- time- and space resolved characterization
- simulation of both the lubricant and the liquid.

We aim to model and characterize anti-fouling, anti-icing and easy-to-clean surfaces.

LubISS is the first world-wide, cooperative research and training initiative to comprehensively address this expanding research field. The knowledge acquired through exchange and expertise holds promise for major breakthroughs and innovations.

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