



ESPCI
Laboratoire PMMH
10 rue Vauquelin, 75231 Paris Cedex 05



Séminaire PMMH

Bureau d'Études, Bâtiment L, 2^{ème} étage

Vendredi 19 mai 2017, 11h00-12h00

Eric Dufresne

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Three-Phase Contacts with Soft Solid Substrates

Surface forces can drive large deformations of soft solids. I will discuss the deformation of soft solids in contact with liquid droplets and rigid particles. Here, classic results for wetting and adhesion fail to describe the equilibrium of three-phase contact lines. While interfacial energies are sufficient to describe wetting and adhesion on stiffer solids, we find that surface stresses play a central role in contact problems with soft solids. The surface stress of a liquid droplet is simply the familiar, isotropic, and strain-independent surface tension. However, the surface stress of a solid is generally more complex. I will show that even gels, which have a large fluid fraction, can demonstrate strain-dependent anisotropic surface stresses.

Attention : pas de séminaire le vendredi 26 mai

Prochain séminaire : vendredi 2 juin, Marcelo Dias

Programme des séminaires : www.pmmh.espci.fr, onglet *Séminaires PMMH*

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