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**Elasto-capillarity: The role of stretching**

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Elasto-capillarity, the interaction between elasticity and surface tension or surface energies, has been much studied in recent years. However, to date the focus has been almost exclusively on situations where the bending stiffness of an object resists deformation by the surface tension of a liquid. In this talk I will consider some situations in which it is instead the stretching stiffness of an elastic object that resists its deformation by surface tension. I will focus on explaining recent experiments that demonstrate the wrinkling of floating elastic membranes [J. Huang *et al.*, *Science* **317**, 650 (2007)] but will also discuss related fundamental problems in wrinkling as well as other situations that involve an interaction between the stretching of an elastic object and capillarity.