# Free boundary regularity for the obstacle problem

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The classical obstacle problem consists of finding the equilibrium position of an elastic membrane whose boundary is held fixed and constrained to lie above a given obstacle. By classical results of Caffarelli, the free boundary is smooth outside a set of singular points. However, explicit examples show that the singular set could be, in general, as large as the regular set. This talk aims to introduce this beautiful problem and describe some classical and recent results on the regularity of the free boundary.