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### **Regularity results for minimal sets**

The lectures should concern minimal sets, with the definition of Almgren that uses Lipschitz deformations and best describes soap films and bubbles. In particular, the important result of Jean Taylor will be discussed, which says that each 2-dimensional minimal set in 3-space is locally equivalent, through  $C^1$  homeomorphisms, to a minimal cones. In this combination of dimensions, the list of minimal cones is known and simple (you see the three of them in soap bubbles), but this is not so in higher dimensions; we shall briefly discuss 2-dimensional sets in  $n$ -space, and a little bit of boundary regularity. The Plateau problem (not solved yet!) will be used as a motivation.