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*Higher-dimensional Willmore energies via minimal submanifold asymptotics.*

An overview of the derivation of a conformally invariant generalization of the Willmore energy for compact immersed submanifolds of even dimension in a Riemannian manifold is given. The energy arises as the coefficient of the log term in the renormalized area expansion of a minimal submanifold in a Poincare-Einstein space with prescribed boundary at infinity. Its first variation is identified as the obstruction to smoothness of the minimal submanifold. The energy is explicitly identified for the case of submanifolds of dimension four. Variational properties of this four-dimensional energy are discussed when the background is a Euclidean space or a sphere, including identifications of critical embeddings, questions of boundedness above and below for various topologies, and second variation. (Received July 17, 2017)