The Willmore conjecture and minimal surfaces

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Abstract:
In 1965, T. J. Willmore conjectured that the integral of the square of the mean curvature of any torus immersed in Euclidean three-space should be at least 2\pi2. In this talk I will discuss a solution to the Willmore conjecture that uses the min-max theory of minimal surfaces. This is joint work with Andre Neves.