

Energy levels of the Willmore Functional and new compactness result

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Resumo/Abstract:

After introducing the Willmore functional, I will outline the conservation laws introduced by Rivire and more recently by Bernard in terms of Noether's theorem. Finally with the help of these tools, but also some uniform estimates on the Green function of the Laplacian on a closed surface, we will study the energy levels of a sequence of compact Willmore surfaces with (or without) control of the conformal class. As a consequence I will also present some new compactness result for sequences of Willmore immersions.