

Concentration compactness phenomena for Willmore surfaces

Friday, June 28, 2024 10:00 AM (30 minutes)

The Willmore energy is fundamental in the study of curved surfaces and arise in various context, such as cell biology, optics, general relativity... Since the work of Mondino-Nguyen in 2018, the Willmore energy can also be understood as the only way to merge the study of minimal surfaces and conformal geometry. Despite its first appearance during the 1810s in the work of Germain and Poisson, the regularity of such surfaces has only been completely settled in the 2000s by Kuwert-Schätzle and Rivière. In order to understand the associated flow, min-max procedures or more generally Palais-Smale sequences, the next step is the study of compactness properties of Willmore surfaces. In this talk, I will present new results concerning the bubble tree convergence. In particular, we will discuss the full classification of bubbles.

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