

GEOMETRY SEMINAR

A Spruck-Xiao-type Theorem

Antonio Luis Martínez-Triviño

Universidad de Granada

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Abstract. Bearing in mind the works of White for minimal surfaces, Rosenberg, Souam and Toubiana for CMC surfaces in 3-manifolds with bounded geometry and Spruck-Xiao for translating solitons, we give a curvature estimate result for stable $[\varphi, \vec{e}_3]$ -minimal surfaces in \mathbb{R}^3 using a compactness argument. As a consequence, inspired by the work of Hoffman, Ilmanen, Martín and White, we show a Spruck-Xiao type theorem for a family of complete $[\varphi, \vec{e}_3]$ -minimal surfaces with $H \leq 0$ and locally bounded genus applying the Omori-Yau maximum principle.