



UNIVERSIDAD DE CÓRDOBA

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## ANUNCIO DE SEMINARIO

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**Título:** Mean convex properly embedded  $[\varphi, \vec{e}_3]$ -minimal surfaces in  $\mathbb{R}^3$ .

**Abstract:** We establish area and curvature estimates together with a convexity result for mean convex properly embedded  $[\varphi, \vec{e}_3]$ -minimal surfaces in  $\mathbb{R}^3$ , i.e,  $\varphi$ -minimal surfaces when  $\varphi$  only depends of the third coordinate of  $\mathbb{R}^3$ . Motivated by the works on curvature estimates for surfaces in 3-manifolds, due to White for minimal surfaces, to Rosenberg, Souam and Toubiana for stable CMC surfaces and to Spruck and Xiao for stable translating solitons in  $\mathbb{R}^3$ , we will use a compactness argument to provide curvature estimates. Finally, we will present a convexity result which generalizes the theorem of Spruck and Xiao for translating solitons. More precisely, we characterize the convexity of a properly embedded  $[\varphi, \vec{e}_3]$ -minimal surface in  $\mathbb{R}^3$  with non-positive mean curvature when the growth at infinity of  $\varphi$  is at most quadratic.

**Lugar:** Aula 1 de Matemáticas. Sótanos del Edificio *Albert Einstein* (C2)

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