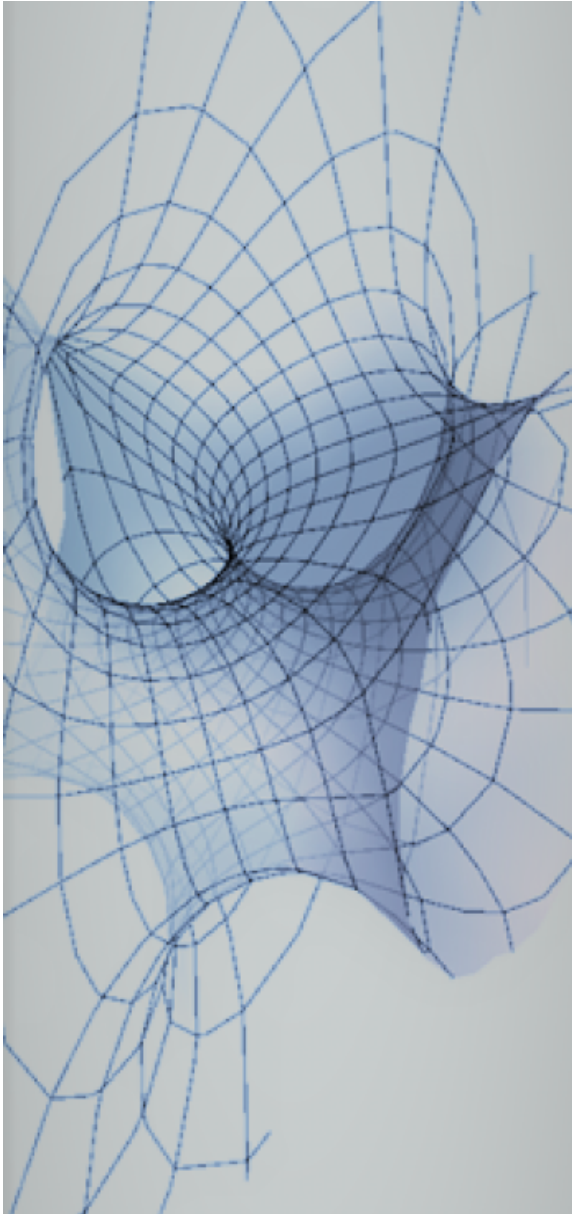


SEMINÁRIO DE GEOMETRIA DIFERENCIAL

IME UFF



PÚBLICO ALVO: PESQUISADORES
E ESTUDANTES DE PÓS GRADUAÇÃO

PALESTRANTE

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LOCAL

Sala 407 4º andar, Bloco H, Campus do
Gragoatá

Elliptic Weingarten surfaces of minimal type in $\mathbb{R}^2 \times_h \mathbb{R}$.

In this talk, we will study the elliptic a certain Weingarten of minimal type surfaces immersed in the warped product space $\mathbb{R}^2 \times_h \mathbb{R}$, where h is a C^1 -function in \mathbb{R}^2 with radial symmetry. Specifically, surfaces whose mean curvature H and extrinsic curvature K satisfy a relationship $H = f(H^2 - K)$ where $f \in C^1(-\epsilon, +\infty)$ with $\epsilon > 0$, $f(0) = 0$ and $4t(f'(t))^2 < 1$ for $t \in (-\epsilon, \infty)$. First, we prove a general maximum principle for elliptic Weingarten surfaces immersed in $\mathbb{R}^2 \times_h \mathbb{R}$ for the case we need. After that, we show, under some assumptions about the warping function h , the existence and uniqueness of the rotationally-invariant examples of elliptic Weingarten of minimal type surfaces immersed in $\mathbb{R}^2 \times_h \mathbb{R}$ as well as we study the geometric behavior of its generating curve. This work in particular extends to the warped products previous results about of these surfaces immersed in the Euclidean space and in the product spaces.

This a joint work with Carlos Peñafiel Espinoza-
UFRJ and Bernardo Quaglia- UFRJ.

CONTATO

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14:00 h