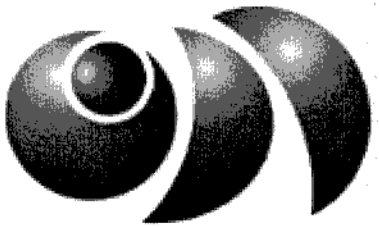

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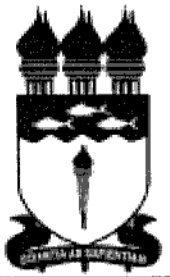

Seminário de Geometria Diferencial & Análise Geométrica

Título: Characterization of hypersurfaces via the second eigenvalue of the Jacobi operator

Palestrante: Abraão Mendes (UFAL)

Resumo: In this work we characterize certain immersed closed hypersurfaces of some ambient manifolds via the second eigenvalue of the Jacobi operator. First, we characterize the Clifford torus as the surface which maximizes the second eigenvalue of the Jacobi operator among all closed immersed orientable surfaces of $\mathbb{S}^3$ with genus bigger than zero. After, we characterize the slices of the warped product $I \times_h \mathbb{S}^n$, under a suitable hypothesis on the warping function $h : I \subset \mathbb{R} \to \mathbb{R}$, as the only hypersurfaces which saturate a certain integral inequality involving the second eigenvalue of the Jacobi operator. As a consequence, we obtain that if Σ is a closed immersed hypersurface of $\mathbb{R} \times \mathbb{S}^n$, then the second eigenvalue of the Jacobi operator of Σ satisfies $\lambda_2 \leq n$ and the slices are the only hypersurfaces which satisfy $\lambda_2 = n$.

Local: Sala da Pós-Graduação - IM/UFAL
Data: 12/04/2018 (Quinta-feira)
Horário: 10h