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APRESENTA:

Bifurcation and Local Rigidity of Constant Second Mean Curvature Hypersurfaces in Riemannian Warped Products

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Auditório da UAMat

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Ciclo de Palestras PPGMat

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BIFURCATION AND LOCAL RIGIDITY OF CONSTANT SECOND MEAN CURVATURE HYPERSURFACES IN RIEMANNIAN WARPED PRODUCTS

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Abstract. In this talk we present some bifurcation and local rigidity results for a certain family of open subsets whose the boundary are closed (compact and without boundary) hypersurfaces of a (n+1)-dimensional Riemannnian warped product $I \times_\alpha M^n$, where the fiber M^n is a closed n-dimensional Riemannian manifold and the base is an open interval $I \subset \mathbb{R}$. More specifically, we establish results of bifurcation and local rigidity associated with a variational problem involving the 1-area functional, for which our family of open subsets can be regarded as critical points.

It is a joint work with Jonatan F. da Silva, Jobson Q. Oliveira and Marco Antonio L. Velásquez.

References

[1] J. F. da Silva, J. Q. Oliveira, A. F. A. Ramalho and M. A. L. Velásquez. Bifurcation and local rigidity of constant second mean curvature hypersurfaces in Riemannian warped products. Nonlinear Analysis-Theory Methods and Applications, v. 197, p. 111865, 2020.

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