



Mestrado Acadêmico
em Matemática



APRESENTA:

Complete spacelike hypersurfaces immersed in pp-wave spacetimes

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Auditório da UAMat

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Palestra:

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Por:

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Data e hora:

28 de Abril de 2023, às 10:00 horas

Resumo: We study some aspects of the geometry of complete spacelike hypersurfaces immersed into a pp-wave spacetime, namely, into a connected Lorentzian manifold admitting a parallel lightlike vector field. Initially, by applying suitable versions of the classical Hopf and Stokes Theorems and a criterion of parabolicity for complete Riemannian manifolds, we obtain sufficient conditions which guarantee that a complete spacelike hypersurface is either maximal, 1-maximal or totally geodesic. As a consequence of these results, we also establish some results of nonexistence concerning such spacelike hypersurfaces.

Palavras chaves: pp-wave spacetimes; complete spacelike hypersurfaces; mean curvature; uniqueness and nonexistence results.

* *Esta palestra corresponde a uma parte do artigo:*

[1] Marco A.L. Velásquez and Henrique F. de Lima, “*Complete spacelike hypersurfaces immersed in pp-wave spacetimes*”, *General Relativity and Gravitation*, v. 52, p. 41, 2020.