Seminário de Geometria Diferencial

On the geometry of complete submanifolds immersed in the hyperbolic space

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Abstract. We deal with n-dimensional complete submanifolds immersed with parallel nonzero mean curvature vector $\mathbf{H}$ in the hyperbolic space $\mathbb{H}^{n+p}$. In this setting, we establish sufficient conditions to guarantee that such a submanifold M^n must be pseudo-umbilical, which means that $\mathbf{H}$ is an umbilical direction. In particular, we conclude that M^n is a minimal submanifold of a small hypersphere of $\mathbb{H}^{n+p}$.

References

[1] H.F. de Lima, F.R. dos Santos and M.A.L. Velásquez, *On the geometry of complete submanifolds immersed in the hyperbolic space*, Bulletin of the Belgian Mathematical Society Simon Stevin **22** (2015), 707–713.