

# SEMINÁRIO DE GEOMETRIA

## Intrinsic and extrinsic geometry of hypersurfaces in $\mathbb{S}^n \times \mathbb{R}$ and $\mathbb{H}^n \times \mathbb{R}$

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Auditório ou (Miniauditório) do MAT

**Abstract.** In this talk, geometric characterizations of conformally flat and radially flat hypersurfaces in  $\mathbb{S}^n \times \mathbb{R}$  and  $\mathbb{H}^n \times \mathbb{R}$  are given by means of their extrinsic geometry. Under suitable conditions on the shape operator, we classify conformally flat hypersurfaces in terms of rotation hypersurfaces. In addition, a close relation between radially flat hypersurfaces and semi-parallel hypersurfaces is established. These results lead to geometric descriptions of hypersurfaces with special intrinsic structures, such as Einstein metrics, Ricci solitons and hypersurfaces with constant scalar curvature.

Joint work with Rafael Novais.