

Spacelike Surfaces of Pseudo-Hyperbolic Space $H_1^4(-1)$ with Finite Type Pseudo-Hyperbolic Gauss Map

Ruya Yegin

Department Mathematics, Faculty of Science and Letters, Turkey
ryegin@itu.edu.tr

ABSTRACT

In this talk, we will present spacelike surfaces having finite type pseudo-hyperbolic Gauss map in the anti-de Sitter space $H_1^4(-1)$. We prove that spacelike surface in the anti-de Sitter $H_1^4(-1)$ space has one-type pseudo-hyperbolic Gauss map if and only if it is maximal with constant scalar curvature and flat normal bundle. Then, we classify spacelike surfaces in $H_1^4(-1)$ with one-type pseudo-hyperbolic Gauss map. Moreover, we give a characterization of spacelike hypersurfaces in $H_1^{n+1}(-1)$ with constant mean curvature and two-type pseudo-hyperbolic Gauss map.