



# HACETTEPE ÜNİVERSİTESİ MATEMATİK BÖLÜMÜ GENEL SEMİNERİ

## (HACETTEPE UNIVERSITY MATHEMATICS GENERAL SEMINAR)

**Tarih (Date):** 22.11.2017, Çarşamba (Wednesday)

**Saat (Time):** 15:00

**Yer (Place):** Yaşar Ataman Seminer Salonu

**Konuşmacı (Speaker):** Doç. Dr. Handan Yıldırım, İstanbul Üniversitesi

**Başlık (Title):** On Legendrian flat dual surfaces in hyperbolic 3-space

**Özet (Abstract):** In this talk which is based on a joint work with Kentaro Saji given in [1], we deal with Legendrian flat dual surfaces in hyperbolic 3-space by using the extended Legendrian dualities between hyperbolic 3-space and one-parameter families of the pseudo-hyperspheres depending on a parameter  $\phi \in [0, \pi/2]$  in Lorentz-Minkowski 4-space. We point out that the flatness of a surface in hyperbolic 3-space is defined by the degeneracy of its Legendrian dual in a similar way to the case for the Gauss map of a surface in Euclidean 3-space. Especially, we consider the case when the Legendrian dual is a spacelike curve in the dual pseudo-hypersphere depending on  $\phi$ . Moreover, we investigate the singularities of these surfaces and the dualities of the singularities.

### References

[1] K. Saji, H. Yıldırım, Legendrian dual surfaces in hyperbolic 3-space, Annales Polonici Mathematici 115 (2015), no. 3, 241-261.