1125-52-468 **Oleg R Musin*** (oleg.musin@gmail.com), One West University blvd, Mathematics, LHSB 2.522, Brownsville, TX 78520. *Minimal spherical representation of graphs.*

Any graph G can be embedded in a Euclidean space as a two–distance set with the minimum distance a if the vertices are adjacent and distance b otherwise. The Euclidean representation number of G is the smallest dimension in which G is representable. In this talk we consider spherical and J - spherical representation numbers of G. We give exact formulas for these numbers using multiplicities of polynomials that are defined by the Caley–Menger determinant. We show that using W. Kuperberg's theorem the representation numbers can be found explicitly for the join of graphs. (Received September 02, 2016)