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Oleg R Musin* (oleg.musin@utb.edu), Dept. of Mathematics, UTB, One West University Boulevard, Brownsville, TX 78520. *Extreme point configurations on spheres and locally rigid contact graphs.*

Recently, we solved the Tammes problem for $N=13$ and $N=14$ by computer enumerating all locally rigid circle packings on the unit sphere. This problem is equivalent to the enumeration of spherical irreducible contact graphs. In this talk we show that by using the list of irreducible graphs can be solve various problems of extreme packings such as the Tammes problem for the sphere and the projective plane, the maximal contacts problem, Danzer's and other problems on irreducible contact graphs. (Received September 10, 2014)