1146-52-399 **Alexey Glazyrin*** (alexey.glazyrin@utrgv.edu). *Optimal spherical antipodal point sets.*

Given a potential function f, for a discrete set of N points on a unit (d-1)-dimensional sphere, one can define the f-energy of this set by summing up the values of f for all pairs of inner products of the set. The main problem is to find the set whose f-energy is minimal when the number of points N and dimension d are fixed.

This talk will be devoted to a class of such problems where the considered sets are antipodal and the function f is even. Several open conjectures and new improvements will be discussed for various potentials, particularly, for power-type functions $f(t) = |t|^p$. (Received January 27, 2019)