1061-14-71 **Santiago López de Medrano*** (santiago@matem.unam.mx), Recreo 95-505., Col. Actipan., 03100 Mexico, D.F., Mexico. *Intersections of Quadrics, Moment-Angle Manifolds and Connected Sums.*

Intersections of quadrics in R^m of the form

$$\Sigma_i \Lambda_i x_i^2 = 0$$

$$\Sigma_i x_i^2 = 1.$$

where $\Lambda_i \in R^k, i = 1, \ldots, m$, have been studied from the point of view of Geometric Topology since the 80's when they appeared in problems of Singularities of Functions, Dynamical Systems and Algebraic Geometry. They include the *moment-angle manifolds*, studied since the 90's from the point of view of Algebraic Topology in the framework of quasi-toric manifolds. In this version they have been the subject of successive generalizations, the last one being abstract and functorial. In all their forms, their study is closely related to group actions and convex polytopes.

We will give a short review of the origin of these manifolds and finish with some recent results describing the topological type of wide families of them. They have been found through a combination of the geometric ideas from the 80's with the more recent functorial approach, although the final proofs are purely geometric. Several new problems about these manifolds and questions of Geometric Topology and Convex Polytopes have been opened by this work (in collaboration with Samuel Gitler). (Received April 04, 2010)