1042-53-128 **Johann Davidov** and **Gueo Grantcharov*** (grantchg@fiu.edu), grantchg@fiu.edu, and **Oleg Mushkarov**. *Neutral hypercomplex structures in dimension four.* Preliminary report.

A neutral hypercomplex structure consists of a complex structure and a couple of product structures, mutually anti-commuting. This structure is naturally associated with a metric of neutral signature, which in dimension four is anti-self-dual. In this talk we report the progress so far in the classification of compact four manifolds admitting such structure. We also notice that an existence of two parallel orthogonal null vector fields on a compact pseudo-Riemannian four manifold of signature (2,2) forces the pseudo-metric to be neutral hyperkahler. (Received August 20, 2008)