1072-53-147 **Victor Guillemin**, **Eva Miranda** and **Ana Rita Pires*** (arita@math.mit.edu), 129 Chestnut St., Cambridge, MA 02139. *Symplectic Geometry on b-manifolds.* Preliminary report.

In 2002, Radko completely classified the Poisson structures on a surface that vanish transversally on a union of curves. For higher dimensional manifolds, this notion generalizes to the top power of the Poisson bivector vanishing transversally on a union of hypersurfaces, and is the analogue of being symplectic when one uses the b-tangent and b-cotangent bundles introduced by Melrose, Nest and Tsygan originally in the context of manifolds with boundary. In this talk we will see what classification results can be obtained for these higher dimensional "symplectic b-manifolds", and how they extend Radko's result for surfaces. (Received June 30, 2011)