1053-30-372 **Mihaela Vajiac*** (mvajiac@chapman.edu). *"Bicomplex Hyperfunctions"*.

In this talk I will develop the foundations for a theory of hyperfunctions as cohomology classes of bicomplex hyperholomorphic functions. The sheaf $\mathcal{H}$ of bicomplex hyperholomorphic functions was defined and studied in an earlier paper. In this second paper we discuss some cohomological properties of $\mathcal{H}$; specifically we compute its flabby dimension and we use the knowledge of its resolution to define a sheaf of hyperfunctions. These hyperfunctions will be objects defined on a codimension three real analytic variety in the space $\mathbb{BC}$ of hypercomplex numbers. This is consistent with the fact that the flabby dimension of $\mathcal{H}$ is three. (Received September 11, 2009)