1099-43-61 **Bertram M. Schreiber*** (bert@math.wayne.edu), Department of Mathematics, Wayne State University, Detroit, MI 48202. *Algebras of Multilinear Forms on Hypergroups.*

For locally compact hypergroups H_i, $i = 1, 2, \cdots, n$, let $CB(H_1, \cdots, H_n)$ denote the Banach space of completely bounded multilinear forms on $C_0(H_1) \times \cdots \times C_0(H_n)$, in the completely bounded norm. $CB(H_1, \cdots, H_n)$ can be given the structure of a Banach $*$-algebra under a multiplication and adjoint operation which agree with the convolution structure on the measure algebra $M(H_1 \times \cdots \times H_n)$. If the H_i are all abelian, $CB(H_1, \cdots, H_n)$ carries a naturally defined Fourier transform as functions on the space of semicharacters which generalizes the Fourier transform on hpergroup measure algebras. The construction of these Banach algebras will be outlined, and various other aspects of $CB(G_1, \cdots, G_n)$ will be described as time permits. This is joint work with Rupert Lasser. (Received January 23, 2014)