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Robert Boltje* (boltje@ucsc.edu) and **Susanne Danz**. *The Ghost Algebra of the Double Burnside Ring*.

The double Burnside Ring $B(G, G)$ of a finite group G is embedded via the additive mark homomorphism (counting fixed points with respect to subgroups of $G \times G$) into the vector space over the rational numbers with basis consisting of the subgroups of $G \times G$. We introduce a natural multiplication on this vector space compatible with the multiplication on $B(G, G)$. This approach has applications to modular representation theory (see Philipp Perepelitsky's talk), fusion systems, and biset functors. (Received August 26, 2013)