1067-16-793   **Samuel K Hsiao** and **Gizem Karaali*** (`gizem.karaali@pomona.edu`), Claremont, CA 91711.
On Multigraded combinatorial Hopf algebras.

We develop a theory of multigraded combinatorial Hopf algebras modeled on the theory of graded combinatorial Hopf algebras developed by Aguiar, Bergeron, and Sottile (2006). In particular we introduce the notion of canonical k-odd and k-even subalgebras associated with any multigraded combinatorial Hopf algebra, extending simultaneously the work of Aguiar et al. and Ehrenborg. (Received September 14, 2010)