1067-05-1257   **Nantel Bergeron**, **Thomas Lam** and **Huilan Li*** (`huilan.li@gmail.com`), Department of Mathematics, Drexel University, 3141 Chestnut Street, Philadelphia, PA 19104. *Towers of Algebras, Combinatorial Hopf Algebras and Dual Graded Graphs.*

I will explain constructions which produce combinatorial Hopf algebras from towers of algebras, and dual graded graphs from Hopf algebras. These constructions are studied to show that towers of algebras $\oplus A_n$ which give rise to combinatorial Hopf algebras must have $\dim(A_n) = r^n n!$ where $r = dim(A_1)$. This is based on joint work with Bergeron and Lam. (Received September 20, 2010)

1