

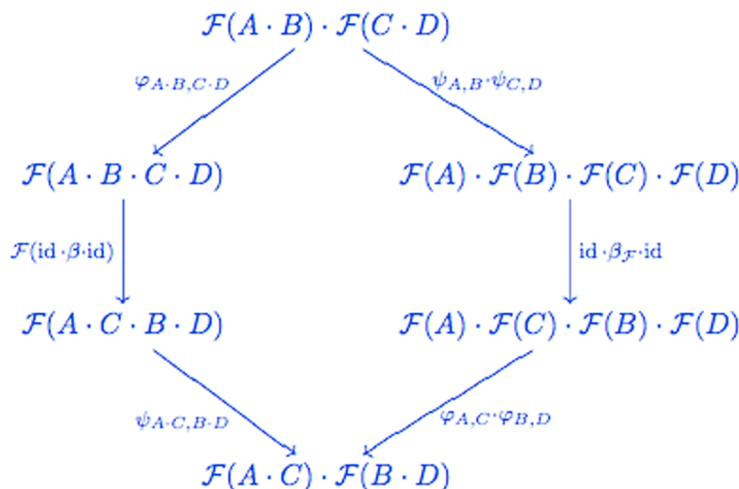
# The Oliver Club

[www.math.cornell.edu/~oliver/](http://www.math.cornell.edu/~oliver/)

**Marcelo Aguiar**, Texas A&M University

## ***Hopf Algebras in Topology, Combinatorics, and Representation Theory***

*Hopf algebras are prominent in various areas of mathematics. In algebraic topology, where the notion originated, they arise from topological groups (or H-spaces). In combinatorics, they encode natural operations one may perform on a given type of discrete structure. In representation theory, they arise as deformations of simple Lie algebras (quantum groups). This talk will describe a theory developed jointly with Mahajan that allows us to view the above constructions in a unified manner. It involves notions such as quantum symmetric algebras, bilax monoidal functors and Joyal's species. Very little knowledge of any of the above notions will be assumed.*



**Thursday, November 19, 2009**  
**at 4:25 PM in 406 Malott Hall**

Refreshments will be served at 3:55 PM in the Mathematics Department lounge (532 Malott Hall).