1165-18-298 **Fabio Calderon*** (facalderonm@unal.edu.co), Bogota, Colombia, and **Chelsea Walton** (notlaw@rice.edu), Houston, TX. *Algebraic properties of face algebras.*

The framework for studying quantum symmetries of non-connected graded algebras is to use (co)actions of weak bialgebras. When such coactions are universally, they form the so-called *Universal Quantum semigroupoids (UQSGs).*

One remarkable example of such situation is when the algebra $A = \Bbbk Q$ is a path algebra over a finite quiver Q. Recently, H. Huang, C. Walton, E. Wicks and R. Won proved that in such case the associated UQSG is isomorphic the Hayashi's face algebra $\mathfrak{H}(Q)$ attached to Q.

In joint work with Chelsea Walton, we study some ring-theoretic and homological properties of $\mathfrak{H}(Q)$. In this talk I will provide the motivation behind this study, the results already obtained and the following steps of our research. (Received January 19, 2021)