1054-16-62 **Aaron D Lauda*** (lauda@math.columbia.edu), Department of Mathematics, 2990 Broadway, New York, NY 10027. *Categorifying Quantum Groups*.

I will explain joint work with Mikhail Khovanov introducing families of graded algebras that are diagrammatically defined. The graded category of modules over these algebras categorifies the negative half of the quantum universal enveloping algebra for any simple Lie algebra. (Received September 01, 2009)