1125-47-179   **Erin Brownlee*** (`erin.olson@ndsu.edu`). *Graph Algebras with Amalgamated Free Products.*
Given a row-finite directed graph, there exists a corresponding C^*-algebra called a *Cuntz-Krieger graph algebra.* While it's known that such an algebra exists for every row-finite directed graph, finding the graph algebra for a given graph has proven to be very challenging. In fact, if the graph has any structure more complicated than a tree or a single cycle, its graph algebra is almost certainly unknown. One way of making progress in this area is by adding an edge-coloring to such a graph. This presentation explores how an edge-coloring can assist in finding the graph algebra for a given graph by implementing amalgamated free products. (Received August 09, 2016)