1023-16-527 **Darren R Funk-Neubauer*** (`neubauer@math.wisc.edu`), 480 Lincoln Drive, Madison, WI 53706-1388. *Tridiagonal pairs and the q-tetrahedron algebra.* Preliminary report.

In this talk I will define a linear algebraic object called a tridiagonal pair. Roughly speaking, a tridiagonal pair is a pair of diagonalizable linear transformations on a finite dimensional vector space in which each transformation acts tridiagonally on the eigenspaces of the other. I will discuss the attempt to classify tridiagonal pairs. An associative algebra called the q-tetrahedron algebra was recently introduced as a tool to make progress towards this classification. I will define the q-tetrahedron algebra and present a result connecting it to tridiagonal pairs. (Received September 15, 2006)

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