1048-16-279 **Paul M Terwilliger*** (terwilli@math.wisc.edu), Math Department, University of Wisconsin, 480 Lincoln Drive, Madison, WI 53706. *Tridiagonal pairs of q-Racah type.*

This talk concerns the tridiagonal pairs of linear transformations. These pairs come in a number of types depending on the form of the eigenvalues. The most general type is called q-Racah. We classify up to isomorphism the tridiagonal pairs of q-Racah type. Our proof uses the representation theory of the quantum affine algebra $U_q(\widehat{\mathfrak{sl}}_2)$. This is joint work with Tatsuro Ito. (Received February 09, 2009)