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Heide Gluesing-Luerssen* (heidegl@ms.uky.edu), University of Kentucky, Dept. of Mathematics, 715 Patterson Office Tower, Lexington, KY 40506-0027. *Isometries for convolutional codes*. Preliminary report.

In this talk we will discuss various notions of equivalence for convolutional codes as well as several weight enumerating objects. Simple examples will show that, opposed to block codes, isometric convolutional codes need not have the same weight enumerators. It will be shown that for a particular class of convolutional codes (not including block codes) codes sharing the same weight enumerator matrix are monomially equivalent. As a generalization of this result one can show that isometric codes of degree at most one sharing the same weight enumerator matrix are monomially equivalent. This result can be regarded as a MacWilliams Equivalence Theorem for this class of codes. (Received August 21, 2008)