

**RATE OF P-CONVERGENCE OVER EQUIVALENT CLASSES OF
DOUBLE SEQUENCE SPACES
RICHARD F. PATTERSON**

DEPARTMENT OF MATHEMATICS AND STATISTICS, UNIVERSITY OF NORTH
FLORIDA JACKSONVILLE, FLORIDA, 32224

ABSTRACT. This paper presents multidimensional characterizations of equivalent classes of double sequences. These characterizations will be analyzed by presenting theorems of the following type: If A is convergent preserving over $\{x \in S_0'' : x \text{ equivalent } b\}$ then there exists $b' \in S_0''$ such that b converges faster than b' and A is convergent preserving over $\{x \in S_0'' : x \text{ equivalent } b'\}$.

E-mail address: `rpatters@unf.edu`