CHARACTERIZATION OF EXPONENTIAL POLYNOMIALS ON COMMUTATIVE HYPERGROUPS

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This paper is dedicated to Professor Tsuyoshi Ando

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ABSTRACT. Exponential monomials are the basic building bricks of spectral analysis and spectral synthesis on Abelian groups. Recently there have been some attempts to extend the most important spectral analysis and spectral synthesis results from groups to hypergroups. For this purpose it is necessary to introduce a reasonable concept of exponential monomials. In this work we reconsider this problem, and using a ring-theoretical approach we prove characterization theorems for particular function classes, which can be considered as "exponential monomials" on commutative hypergroups.

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