

## **Noncanonical factorization**

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Noncanonical factorizations are studied in the abstract context of matrix valued functions defined on connected compact abelian groups, with respect to a total order on the dual abelian group. The basic examples are the dual group of integers and the dual group of reals with the discrete topology (with the natural total orders). Criteria for factorizability for some classes of matrix functions are given. Several open problems will be stated. Applications include systems of difference equations with delays, orthogonal polynomials, and Toeplitz operators.