

## UNIQUE PRIME FACTORIZATION IN A PARTIAL SEMIGROUP OF MATRIX-POLYNOMIALS

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### Abstract

We establish a unique factorization result into irreducible elements in the partial semigroup of  $2 \times 2$ -matrices with entries in  $K[x]$  whose determinant is equal to 1, where  $K$  is a field, and where multiplication is defined as the usual matrix-multiplication if the degrees of the factors add up. This investigation is motivated by a result on matrices of entire functions.

**Keywords:** partial semigroup, unique prime factorization.

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