



## Chebyshev Matrix Polynomials of the Third and Fourth Kinds

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Received September 8, 2019; Revised September 30, 2019

### Abstract

Chebyshev matrix polynomials of the first and second kinds are defined in [E. Defez and L. Jódar, Chebyshev matrix polynomials and second order matrix differential equations, *Utilitas Mathematica* 61 (2002), 107-123] and [Raed S. Batahan, A new extension of Hermite matrix polynomials and its applications, *Linear Algebra Appl.* 419(1) (2006), 82-92], respectively. We define Chebyshev matrix polynomials of the third and fourth kinds.

**Keywords and phrases:** Chebyshev matrix polynomials, Chebyshev polynomials of the third and fourth kinds.

Pioneer Journal  
of Mathematics  
and Mathematical  
Sciences



Pioneer Scientific  
Publisher