

## Rings of Skew Polynomials in Algebraical Approach to Control Theory

Jan Ježek

*Abstract:* The paper aims at building a mathematical device, generalizing the polynomial approach in the control theory from time invariant systems to time varying ones. For that purpose, the algebraical rings are equipped with some operations more: the shift, the difference or the derivation. Based on that, the skew polynomials are defined which are non-commutative but satisfy a commutation equation.

*Keywords:*

*AMS Subject Classification:*