
WAI-SHUN CHEUNG, The University of Hong Kong, Hong Kong

A matrix approach to the study of generalised derivatives of polynomials

Consider a polynomial p and a generalised derivative q of p . We construct two matrices whose characteristic polynomials are p and q respectively, and use the properties of the two matrices to study the relations between the zeros of p and the zeros of q . This approach is a generalization of the concept of differentiators recently revived by R. Pereira.