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COMPLETENESS OF PART OF EIGEN AND ADJOINT VECTORS OF A CLASS OF FOURTH ORDER POLYNOMIAL OPERATOR PENCILS

Abstract

In the paper, the completeness of a part of the system of eigen and adjoint vectors of a class of fourth order polynomial operator pencils responding to a boundary value problem on a semi-axis, is proved. The distinctive feature of the pencil under investigation is the availability of such kind multiple characteristic in its principal part that has not been studied earlier.