WEYL MATRIX FUNCTIONS AND INVERSE PROBLEMS FOR DISCRETE DIRAC–TYPE SELF–ADJOINT SYSTEMS: EXPLICIT AND GENERAL SOLUTIONS

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Abstract. It is shown that the discrete Dirac-type self-adjoint system is equivalent to the block Szegő recurrence. A representation of the fundamental solution is obtained, inverse problems on the interval and semiaxis are solved. A Borg-Marchenko type result is obtained, too. Connections with block Toeplitz matrices are treated


Key words and phrases: Discrete Dirac system, Szegő recurrence, Weyl function, inverse problem, $j$-theory, block Toeplitz matrix.

REFERENCES


