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ON THE KREĬN-LANGER INTEGRAL REPRESENTATION OF GENERALIZED NEVANLINNA FUNCTIONS*

J. ROVNYAK† AND L. A. SAKHNOVICH‡

Abstract. The Kreĭn-Langer integral representation of a matrix-valued generalized Nevanlinna function arises in problems of spectral theory and interpolation. A version of this formula which is suitable for such problems, and a corresponding Stieltjes inversion formula, are derived. Some classes of generalized Nevanlinna functions which are defined in terms of behavior at infinity are characterized in terms of their integral representations.

Key words. Generalized Nevanlinna function, Matrix-valued function, Integral representation, Stieltjes inversion formula, Negative squares.

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†University of Virginia, Department of Mathematics, P. O. Box 400137, Charlottesville, VA 22904–4137 (rovnyak@Virginia.EDU). Supported by the National Science Foundation Grant DMS-0100437.

‡ Research Professor, University of Connecticut at Storrs. Address: 735 Crawford Avenue, Brooklyn, NY 11223 (Lev.Sakhnovich@verizon.net). L. A. Sakhnovich thanks the University of Virginia for hospitality during visits when this work was carried out.