

# Weyl theory for Dirac operators and applications to initial-boundary value problems

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We present Weyl theory for Dirac operators (selfadjoint and skew-self-adjoint cases). Direct and inverse problems are discussed. Applications to initial-boundary value problems for integrable wave equations are given. In particular, interesting interrelations between initial and boundary conditions are studied. This talk is based on various results from [1] and their further developments. The talk and research are supported by the Austrian Science Fund (FWF) under Grant No. P24301.

[1] A.L. Sakhnovich, L.A. Sakhnovich, and I.Ya. Roitberg, *Inverse problems and nonlinear evolution equations. Solutions, Darboux matrices and Weyl-Titchmarsh functions*. De Gruyter Studies in Mathematics **47**. De Gruyter, Berlin, 2013.