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Spectral Theory of Adjointable Operators in Spaces with two Metrics

If a BANACH space is embedded in a HILBERT or KREĬN space, one says that we are given a *space with two metrics*. We consider linear operators acting in such spaces, for which there exists a suitably defined adjoint operator with respect to the second metric. The theory of these *adjointable operators* originates in a pioneering paper of KREĬN [1947], and has been reconsidered by a number of authors since then. We present a unifying treatment of these development as well as some new results. The theory of *symmetrizable* and *normalizable* operators is covered as a special case. Applications to the theory of *definitizable* operators in KREĬN spaces are indicated. The results have been partly obtained in joint work with TH. YA. AZIZOV, Voronesh University, Russia.