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Homotopy classes of elliptic boundary problems

An operatorial approach towards homotopy classification of elliptic boundary problems will be described which relies on homotopy groups of auxiliary Wiener-Hopf operator groups. It will be explained how one can obtain ample information about the structure of those homotopy groups in concrete cases. Comprehensive concrete results will be presented for the abstract linear conjugation problems, in the sense of B. Bojarsky, and generalized Cauchy-Riemann systems, in the sense of E. Stein and G. Weiss. Reference: G. Khimshiashvili, Homotopy classes of elliptic transmission problems over C*-algebras, *Georgian Math. Journal* **5**(1998), 533-546.