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Autore　　Alpay Daniel

Titolo　　An Advanced Complex Analysis Problem Book : Topological Vector Spaces, Functional Analysis, and Hilbert Spaces of Analytic Functions / / by Daniel Alpay

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Nota di contenuto　　Prologue -- Part I, Analytic functions -- 1 Some algebra -- 2 Exercises in complex variables -- Part II, Topology and functional analysis -- 3 Topological spaces -- 4 Normed spaces -- 5 Locally convex topological vector spaces -- 6 Some functional analysis -- Part III, Hilbert spaces of analytic functions -- 7 Reproducing kernel Hilbert spaces -- 8 Hardy spaces -- 9 de Branges-Rovnyak spaces -- 10 Bergman spaces -- 11 Fock spaces -- Index -- Name index -- Notation index.

Sommario/riassunto　　This is an exercises book at the beginning graduate level, whose aim is to illustrate some of the connections between functional analysis and the theory of functions of one variable. A key role is played by the notions of positive definite kernel and of reproducing kernel Hilbert space. A number of facts from functional analysis and topological vector spaces are surveyed. Then, various Hilbert spaces of analytic functions are studied.