A quadratic form is called Hankel (resp. Toeplitz) if entries of its matrix depend on the sum (resp. the difference) of indices only. These forms appeared as objects and tools in works of Jacobi, Stieltjes (and then Hilbert, Plemelj, Schur, Szegő, Toeplitz ...). They play a decisive role in a very wide circle of problems (various kinds of moment problems, interpolation by analytic functions, inverse spectral problems, orthogonal polynomials, Prediction Theory, Wiener-Hopf equations, boundary problems of Function Theory, the extension theory of symmetric operators, singular integral equations, models of statistical physics etc.etc.). It was understood only later that the independent development of this apparatus is a prerequisite for its applications to the above "concrete" fields, and Hankel and Toeplitz operators were singled out as the object of a separate branch of Operator Theory. This branch includes:

- techniques of singular integrals ranging from Hilbert, M. Riesz and Privalov to the Helson-Szegő theorem discovered as a fact of Prediction Theory, and to localization principles of Simonenko and Douglas;

- algebraic schemes originating from the fundamental concept of symbol of a singular integral operator (Mihlin), from the semi-mul-
tiplicative dependence of Toeplitz operator on its symbol, (Wiener-Hopf), and culminating in the operator $K$-theory;

- methods and techniques of extension theory (Krein), which have attracted a new interest to metric properties of Hankel operators and to their numerous connections;

- other important principles and ideas which we have either forgotten or overlooked or had no possibility to mention here.

The inverse influence of Hankel and Toeplitz operators is also considerable. For example, many problems of this chapter fit very well into the context of other chapters: Banach Algebras (Problem 5.6), best approximation (Problem 5.1), singular integrals (Problem 5.14). Problems 2.11, 3.1, 6.6, 10.2 can hardly be severed from spectral aspects of Toeplitz operators, and Problems 3.2, 3.3, 4.15, 4.21, 8.13, 5.6, from Hankel operators. Many problems related to the Sz.-Nagy-Foiaš model (4.9-4.14) can be translated into the language of Hankel-Toeplitz (possibly, vectorial) operators, because functions $\varphi(T_\theta)$ of the model operator $T_\theta$ coincide essentially with the Hankel operators $H_{\theta \varphi}$, and the proximity of model subspaces $K_{\theta_1}$ and $K_{\theta_2}$ can be expressed in terms of the Toeplitz operator $T_{\theta_1\theta_2}$, etc.

Hankel-Toeplitz problems assembled in this book do not exhaust even the most topical problems of this direction*), but contain many interesting questions and suggest some general considerations. Many of the problems are inspired by some other fields and are rooted there so deeply that it is difficult to separate them from the corresponding context. We had to place some Hankel-Toeplitz problems (not without hesitation and disputes) into other chapters. Examples can be found in Chapter 3 (3.1, 3.2, 3.3). Moreover, we believe that

*) To our surprise nobody has asked, for instance, whether every Toeplitz operator has a non-trivial invariant subspace...