

CONTENTS

Preface	vii
Introduction	ix
Part I. Recovery of differential operators from the Weyl matrix	
1. Formulation of the inverse problem. A uniqueness theorem	1
2. Solution of the inverse problem on the half-line	13
3. Differential operators with a simple spectrum	36
4. Solution of the inverse problem on a finite interval	51
5. Inverse problems for the self-adjoint case	76
6. Differential operators with singularities	87
Part II. Recovery of differential operators from the Weyl functions	
7. Differential operators with a "separate" spectrum	99
8. Stability of the solution of the inverse problem	107
9. Method of standard models. Information condition	137
10. An inverse problem of elasticity theory	154
11. Differential operators with locally integrable coefficients	159
12. Discrete inverse problems. Applications to differential operators	177
13. Inverse problems for integro-differential operators	202
Appendix I. Solution of the Boussinesq equation on the half-line by the inverse problem method	219
Appendix II. Integrable dynamical systems connected with higher-order difference operators	233
References	243
Subject index	251