

## CONTENTS

INTRODUCTION	1
CHAPTER 1	
<b>GUARANTEED ESTIMATES OF PARAMETER AND STATE VECTORS</b>	
1.1. Guaranteed Estimates of Linear Systems Parameters	5
1.2. Guaranteed Estimates of Linear Dynamic Systems Parameters	44
1.3. Guaranteed Estimates of Parameters of Linear Nonstationary Discrete Systems	49
1.4. Simultaneous Construction of Parameter Vectors and State Vectors Estimates of Linear Dynamic Systems	58
1.5. Guaranteed Estimates in Systems Nonlinear in Parameters	67
CHAPTER 2	
<b>ANALYSIS AND SYNTHESIS OF ADAPTIVE CONTROL SYSTEMS</b>	
2.1. General Characteristic of Adaptive Control Systems	85
2.2. Synthesis of Adaptive Optimal Stabilizing Systems (the Simplest Case)	91
2.3. Synthesis of Adaptive Optimal Stabilizing Systems (the General Case)	112
2.4. Synthesis of Adaptive Optimal Stabilizing Systems for Nonstationary Plants	127
2.5. Synthesis of Adaptive Optimal Stabilizing Systems with Measurement Errors	140
2.6. Synthesis of Adaptive Control Systems Optimal in Functional	150
CHAPTER 3	
<b>ANALYSIS AND SYNTHESIS OF ROBUST CONTROL SYSTEMS</b>	
3.1. Analysis and Synthesis of Control Systems under Uncertainty Conditions	158
3.2. Robust Stability of Continuous Dynamic Systems	160
3.3. Robust Stability of Discrete Dynamic Systems	170
3.4. Synthesis of Optimal Robust Linear Control	176
3.5. Synthesis of Optimal Robust Control with Restricted Noise	188

APPENDIX A	
Reduction of Difference Equations of General Form to Canonical Form	196
REFERENCES	203
INDEX	208