1. Record Nr. UNINA9910829090303321

Autore	Malyshev V. V (Veniamin Vasilevich)
Titolo	Optimization of observation and control processes [[electronic resource] /] / Veniamin Vasilyevich Malyshev, Mihkail Naumovich Krasilshikov, Valeri Ivanovich Karlov
Pubbl/distr/stampa	Washington, D.C., : American Institute of Aeronautics and Astronautics, Inc., c1992
ISBN	1-60086-222-5 1-60086-094-X
Descrizione fisica	1 online resource (361 p.)
Collana	Education series
Altri autori (Persone)	KrasilshchikovM. N (Mikhail Naumovich) KarlovV. I (Valerii Ivanovich)
Disciplina	629.47/4
Soggetti	Space vehicles - Control systems - Design and construction Navigation (Astronautics)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (p. 329-335) and index.
Nota di contenuto	""Cover""; ""Title""; ""Copyright""; ""Table of Contents""; ""Preface""; ""Chapter 1. Probabilistic Criterion in Problems of Observation and Control""; ""1.1. General Statement of Probabilistic Problems""; ""1.2. Concretization of the Quality Functional in Problems of Observation and Control""; ""1.3. Numerical Algorithms for Finding Functionals of Probability and Quantile""; ""Chapter 2. Optimal Design of the Observation Process: Stochastic Approach""; ""2.1. Formalization of Design Problems as the Program Control Problems""; ""2.2. Equivalent Problems of Program Control"" ""2.3. Necessary Conditions of Optimality on the Basis of Maximum Principle""""""2.4. Numerical Algorithms of Optimal Measurement Plan Construction""; ""2.5. Connection of Equivalent Problems with Dual-Control Problems""; ""2.6. Extension of Results to a Discrete Case""; ""Chapter 3. Optimal Filtering and Optimal Design of the Observation Process: Guaranteeing Approach""; ""3.1. Experiment Model: Basic Variants of Error Description""; ""3.2. Solution of Optimal Filtering and the Design Problem Under Uncertainty: Variants 1 and 2"" ""3.3. Solution of Optimal Filtering and the Design Problem Under a Combination of Random and Uncertain Factors: Variant 3""""""3.4.

Solution of Optimal Filtering and Design Problem Under Combination of Random and Uncertain Factors: Variant 4""; ""3.5. Example of Navigational Measurement Process Optimization in AES Orbit Definition""; ""Chapter 4. Optimization of Active Experiments""; ""4.1. An Active Experiment with a View to Improving the Observability Conditions""; ""4.2. Example of Optimization of the Rotation of an Accelerometer for Detecting a Gyroplatform's Deflection""
""4.3. Example of Optimizing an Aircraft-Observer's Informational Maneuver""""4.4. Example of Optimization of the Active Experiment in Autonomous Navigation of a Geostationary Earth Satellite""; ""4.5. Optimization of Informational Noise When Observing a Dynamic Object""; ""4.6. Example of Observing a Maneuvering Object"";
""Chapter 5. Control-Process Optimization as a Problem of Design"";
""5.1. Optimization of the Process of Controlling a Deterministic System""; ""5.2. Optimization of the Process of Controlling a Stochastic System""
""5.3. Control Optimization on the Basis of the Probabilistic Criterion""""" 5.4. Optimal Combination of Observation and Control""; ""5.5. Example of Optimization of One-Parametric Correction of a Spacecraft's Path"";
""5.6. Example of Optimization of the Process of Navigational Measurement When Controlling a Geostationary Earth Satellite's Orbit"";
""Appendices""; ""References""; ""Glossary""; ""Explanation of Symbols"";
""Index""; ""A""; ""B""; ""C""; ""D""; ""E""; ""F""; ""G""; ""H""; ""I""; ""K""; ""L"";
""M""; ""N""; ""O""; ""P""; ""Q""; ""R""; ""S""; ""T""; ""U""; ""V""; ""W""