

Optimal Discrete Control Theory: The Rational Function Structure Model

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This book discusses essential topics of single-input and single-output discrete control systems. Divided into ten chapters, the book covers fundamental topics like discretization of continuous transfer function models, system identification, feedback, feedforward and feedforward-feedback controllers design and controller's performance judgement.

Chapter Titles:

1. Introduction
2. Physical System Equations and Control Systems
3. ARIMA Time Series
4. Discrete Linear Control Systems
5. Estimation Methods
6. System Identification
7. Deterministic Tracking Controllers
8. Stochastic Regulating Controllers
9. H_∞ Controllers
10. Controller's Performance

The book was written for practicing control engineers as well as graduate students in control engineering. It can be used as a self-study material or a reference textbook. There are numerous examples throughout the book and exercises at the end of each chapter.

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