

Linear feedback control: analysis and design with MATLAB

Xue, Dingyu, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20448929&lokasi=lokal>

Abstrak

This book discusses analysis and design techniques for linear feedback control systems using MATLAB software. By reducing the mathematics, increasing MATLAB working examples, and inserting short scripts and plots within the text, the authors have created a resource suitable for almost any type of user. For beginners, the book provides an efficient entrance into the field; for readers who have already had a first course in control, the text helps bridge the gap between control theory and the use of MATLAB for control systems; for practicing engineers, it serves as a handy reference.

The book begins with a summary of the properties of linear systems and addresses modeling and model reduction issues. In the subsequent chapters on analysis, the authors introduce time domain, complex plane, and frequency domain techniques. Their coverage of design includes discussions on model-based controller designs, PID controllers, and robust control designs. A unique aspect of the book is its inclusion of a chapter on fractional-order controllers, which are useful in control engineering practice.