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Introduction Broad Context and Motivation Concurrent Engineering: A Road Map for Energy Quantitative Robust Control Novel CAD Toolbox for QFT Controller Design Outline Part I: Advanced Robust Control Techniques: QFT and Nonlinear Switching Introduction to QFT Quantitative Feedback Theory Why Feedback? QFT Overview Insight into the QFT Technique Benefits of QFT MISO Analog QFT Control System Introduction QFT Method (Single-Loop MISO System) Design Procedure Outline Minimum-Phase System Performance Specifications J LTI Plant Models Plant Templates of  $P(s)$ ,  $P(j\omega)$  Nominal Plant U-Contour (Stability Bound) Trackin