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Nota di contenuto	Introduction to Control -- Stabilizing Sets for Linear Time Invariant Continuous-Time Plants -- Stabilizing Sets for Ziegler-Nichols Plants -- Stabilizing Sets for Linear Time Invariant Discrete-Time Plants -- Computation of Stabilizing Sets From Frequency Response Data -- Gain and Phase Margin Based Design for Continuous-Time Plants -- Gain-Phase Margin Based Design of Discrete Time Controllers -- PID Control of Multivariable Systems -- H Optimal Synthesis for Continuous-Time Systems -- H Optimal Synthesis for Discrete-Time Systems.
Sommario/riassunto	This monograph presents a new analytical approach to the design of proportional-integral-derivative (PID) controllers for linear time-invariant plants. The authors develop a computer-aided procedure, to

synthesize PID controllers that satisfy multiple design specifications. A geometric approach, which can be used to determine such designs methodically using 2- and 3-D computer graphics is the result. The text expands on the computation of the complete stabilizing set previously developed by the authors and presented here. This set is then systematically exploited to achieve multiple design specifications simultaneously. These specifications include classical gain and phase margins, time-delay tolerance, settling time and H-infinity norm bounds. The results are developed for continuous- and discrete-time systems. An extension to multivariable systems is also included. Analytical Design of PID Controllers provides a novel method of designing PID controllers, which makes it ideal for both researchers and professionals working in traditional industries as well as those connected with unmanned aerial vehicles, driverless cars and autonomous robots. .