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Titolo	Control Based on PID Framework : The Mutual Promotion of Control and Identification for Complex Systems / / edited by Wei Wang
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Descrizione fisica	1 online resource (xiii, 144 pages) : illustrations
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Sommario/riassunto	With numerous new opportunities and challenges emerging from the topic of the cognition and control of complex systems, the methods related to PID control, or control based on a PID framework, will continue to grow and expand. This book covers some of the recent results that include improvements to the PID controller. Some examples of these improvements are as follows: •The novelty method of the variable, fractional-order PID controller •The optimization of PID controller, such as the hybrid LQR-PID controller by using genetic algorithm (GA) with the application for the control of helicopter systems •The optimized tuning approach of PID controller with disturbance rejection •A controller adjustment method based on the internal product of PID terms •The PI-PD controller, incorporated with the model-based feedforward control (FF) and the disturbance compensator (Kz), which is used for the control of magnetic levitation systems •The proper control with PID framework used to improve the cognition or identification for complex systems.