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Nota di contenuto	Introduction.- Part -- Advances in gain-scheduling techniques -- Background on gain-scheduling.- Automated generation and comparison of Takagi-Sugeno and polytopic quasi-LPV models -- Robust state-feedback control of uncertain LPV systems.- Shifting state-feedback control of LPV systems -- part 2 -- Background on fault tolerant control.- Fault tolerant control of LPV systems using robust state-feedback control.- Fault tolerant control of LPV systems using recongured reference model and virtual actuators -- Fault tolerant control of unstable LPV systems subject to actuator saturations and fault isolation delay -- Conclusions and future work.
Sommario/riassunto	This thesis reports on novel methods for gain-scheduling and fault tolerant control (FTC). It begins by analyzing the connection between

the linear parameter varying (LPV) and Takagi-Sugeno (TS) paradigms. This is then followed by a detailed description of the design of robust and shifting state-feedback controllers for these systems. Furthermore, it presents two approaches to fault-tolerant control: the first is based on a robust polytopic controller design, while the second involves a reconfiguration of the reference model and the addition of virtual actuators into the loop. In short, the thesis offers a thorough review of the state-of-the art in gain scheduling and fault-tolerant control, with a special emphasis on LPV and TS systems.