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Autore	Chadli Mohammed
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1.

	 3.2.2. Pole placement; 3.2.3. Application: asynchronous machine; 3.2.4. Synthesis of multiple observers 3.3. Multiple observer for an uncertain multiple model3.4. Synthesis of unknown input observers; 3.4.1. Unknown inputs affecting system state; 3.4.2. Unknown inputs; 3.5. Synthesis of unknown input observers: another approach; 3.5.1. Principle; 3.5.2. Multiple observers subject to unknown inputs and uncertainties; 3.6. Conclusion; Chapter 4. Stabilization of Multiple Models; 4.1. Introduction; 4.2. Full state feedback control; 4.2.1. Linearization; 4.2.2. Specific case; 4.2.3 stability: decay rate 4.3. Observer-based controller4.3.1. Unmeasurable decision variables; 4.4. Static output feedback control; 4.4.1. Pole placement; 4.5. Conclusion; Chapter 5. Robust Stabilization of Multiple Models; 5.1. Introduction; 5.2. State feedback control; 5.3.1. Norm-bounded uncertainties; 5.3.2. Interval uncertainties; 5.3.2. Interval uncertainties; 5.3.2. Interval uncertainties; 5.4. Observer-based control; 5.5. Conclusion; Conclusion; APPENDICES; Appendix 1: LMI Regions; A1.1. Definition of an LMI region; A1.2. Interesting LMI region examples A1.2.1. Open left half-planeA1.2.2stability; A1.2.3. Vertical band; A1.2.4. Horizontal band; A1.2.5. Disk of radius R, centered at (q,0); A1. 2.6. Conical sector.; Appendix 2: Properties of M-Matrices; Appendix 3: Stability and Comparison Systems; A3.1. Vector norms and overvaluing systems; A3.1.1. Definition of a vector norm; A3.1.2. Definition of a system overvalued from a continuous process; A3.1.3. Application; A3. 2. Vector norms and the principle of comparison; A3.3. Application to stability analysis: Bibliography: Index
Sommario/riassunto	Much work on analysis and synthesis problems relating to the multiple model approach has already been undertaken. This has been motivated by the desire to establish the problems of control law synthesis and full state estimation in numerical terms. In recent years, a general approach based on multiple LTI models (linear or affine) around various function points has been proposed. This so-called multiple model approach is a convex polytopic representation, which can be obtained either directly from a nonlinear mathematical model, through mathematical transformation or through linearizat