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Autore	Foias Ciprian
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Altri autori (Persone)	FoiasCiprian MoscaEdoardo PandolfiL (Luciano)
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Nota di contenuto	Commutant lifting techniques for computing optimal H <sub>∞</sub> controllers -- Lectures on H <sub>∞</sub> control and sampled-data systems -- Two topics in systems engineering: Frequency domain design and nonlinear systems -- The polynomial approach to H <sub>∞</sub> -optimal regulation -- Notes on L <sub>1</sub> -optimal control -- On the hamiltonian structure in the computation of singular values for a class of Hankel operators -- Nehari interpolation problem for rational matrix functions: The generic case -- Time variant extension problems of Nehari type and the band method.
Sommario/riassunto	The fundamental problem in control engineering is to provide robust performance to uncertain plants. H <sub>∞</sub> -control theory began in the early eighties as an attempt to lay down rigorous foundations on the classical robust control requirements. It now turns out that H <sub>∞</sub> -control theory is at the crossroads of several important directions of research space or polynomial approach to control and classical interpolation theory; harmonic analysis and operator theory; minimax LQ stochastic control and integral equations. The book presents the underlying fundamental ideas, problems and advances through the pen of leading contributors to the field, for graduate students and researchers in both engineering and mathematics. From the Contents: C. Foias: Commutant

Lifting Techniques for Computing Optimal H Controllers.- B.A. Francis:  
Lectures on H Control and Sampled-Data Systems.- J.W. Helton: Two  
Topics in Systems Engineering Frequency Domain Design and Nonlinear  
System.- H. Kwakernaak: The Polynomial Approach to H -Optimal  
Regulation.- J.B. Pearson: A Short Course in I - Optimal Control.

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