

Table of Contents

1	Introduction	1
2	The Algebraic Framework	7
3	The Algebraic Structure of \mathcal{H}_0	23
3.1	Divisibility Properties	25
3.2	Matrices over \mathcal{H}_0	35
3.3	Systems over Rings: A Brief Survey	43
3.4	The Nonfinitely Generated Ideals of \mathcal{H}_0	45
3.5	The Ring \mathcal{H} as a Convolution Algebra	51
3.6	Computing the Bezout Identity	59
4	Behaviors of Delay-Differential Systems	73
4.1	The Lattice of Behaviors	76
4.2	Input/Output Systems	89
4.3	Transfer Classes and Controllable Systems	95
4.4	Subbehaviors and Interconnections	104
4.5	Assigning the Characteristic Function	115
4.6	Biduals of Nonfinitely Generated Ideals	129
5	First-Order Representations	135
5.1	Multi-Operator Systems	138
5.2	The Realization Procedure of Fuhrmann	148
5.3	First-Order Realizations	157
5.4	Some Minimality Issues	162
	References	169
	Index	175

Linear Delay-Differential Systems with Commensurate
Delays: An Algebraic Approach

Gluesing-Luerssen, H.

2002, X, 178 p., Softcover

ISBN: 978-3-540-42821-3