

Contents

Preface vii
 Editor-in-Chief ix
 Contributors xi

SECTION I Mathematics

1 Linear Operators and Matrices 1-1
Cheryl B. Schrader and Michael K. Sain

2 Bilinear Operators and Matrices 2-1
Michael K. Sain and Cheryl B. Schrader

3 Laplace Transformation 3-1
John R. Deller, Jr.

4 Fourier Methods for Signal Analysis and Processing 4-1
W. Kenneth Jenkins

5 z-Transform 5-1
Jelena Kovačević

6 Wavelet Transforms 6-1
P. P. Vaidyanathan and Igor Djokovic

7 Graph Theory 7-1
Krishnaiyan Thulasiraman

8 Signal Flow Graphs 8-1
Krishnaiyan Thulasiraman

9 Theory of Two-Dimensional Hurwitz Polynomials 9-1
Hari C. Reddy

10 Application of Symmetry: Two-Dimensional Polynomials,
 Fourier Transforms, and Filter Design 10-1
Hari C. Reddy, I-Hung Khoo, and P. K. Rajan

SECTION II Circuit Elements, Devices, and Their Models

11	Passive Circuit Elements	11-1
	<i>Stanislaw Nowak, Tomasz W. Postupolski, Gordon E. Carlson, and Bogdan M. Wilamowski</i>	
12	RF Passive IC Components	12-1
	<i>Tomas H. Lee, Maria del Mar Hershenson, Sunderarajan S. Mohan, Hirad Samavati, and C. Patrick Yue</i>	
13	Circuit Elements, Modeling, and Equation Formulation	13-1
	<i>Josef A. Nossek</i>	
14	Controlled Circuit Elements	14-1
	<i>Edwin W. Greeneich and James F. Delansky</i>	
15	Bipolar Junction Transistor Amplifiers	15-1
	<i>David J. Comer and Donald T. Comer</i>	
16	Operational Amplifiers	16-1
	<i>David G. Nairn and Sergio B. Franco</i>	
17	High-Frequency Amplifiers	17-1
	<i>Chris Toumazou and Alison Payne</i>	

SECTION III Linear Circuit Analysis

18	Fundamental Circuit Concepts	18-1
	<i>John Choma, Jr.</i>	
19	Network Laws and Theorems	19-1
	<i>Ray R. Chen, Artice M. Davis, and Marwan A. Simaan</i>	
20	Terminal and Port Representations	20-1
	<i>James A. Svoboda</i>	
21	Signal Flow Graphs in Filter Analysis and Synthesis	21-1
	<i>Pen-Min Lin</i>	
22	Analysis in the Frequency Domain	22-1
	<i>Jiri Vlach and John Choma, Jr.</i>	
23	Tableau and Modified Nodal Formulations	23-1
	<i>Jiri Vlach</i>	
24	Frequency-Domain Methods	24-1
	<i>Peter B. Aronhime</i>	
25	Symbolic Analysis	25-1
	<i>Benedykt S. Rodanski and Marwan M. Hassoun</i>	
26	Analysis in the Time Domain	26-1
	<i>Robert W. Newcomb</i>	
27	State-Variable Techniques	27-1
	<i>Kwong S. Chao</i>	

Index	IN-1
--------------------	-------------