

List of Figures

Figure 2.1: Different types of integral approximations.....	21
Figure 2.2: Mapping of the stability region between the s-plane and the z-plane.	22
Figure 2.3: Flow chart for the development of reduction methodologies.....	24
Figure 3.1: Step responses of reduced models (Lower Limit) for E.3.2.1.....	30
Figure 3.2: Step responses of reduced models (Upper Limit) for E.3.2.1.....	30
Figure 3.3: Frequency responses of reduced models (Lower Limit) for E.3.2.1....	31
Figure 3.4: Frequency responses of reduced models (Upper Limit) for E.3.2.1....	31
Figure 3.5: Flow chart for the arithmetic operator approximation.....	35
Figure 3.6: Frequency responses of reduced models (Lower Limit) for E.3.3.1....	38
Figure 3.7: Frequency responses of reduced models (Upper Limit) for E.3.3.1....	38
Figure 3.8: Step responses of reduced models (Lower Limit) for E.3.4.1.....	45
Figure 3.9: Step responses of reduced models (Upper Limit) for E.3.4.1.....	45
Figure 3.10: Flow chart for the simplified interval structure approximation.....	49
Figure 3.11: Step responses of reduced models (Lower Limit) for E.3.5.1.....	52
Figure 3.12: Step responses of reduced models (Upper Limit) for E.3.5.1.....	52
Figure 3.13: Frequency responses of reduced models (Lower Limit) for E.3.5.1...	53
Figure 3.14: Frequency responses of reduced models (Upper Limit) for E.3.5.1..	53
Figure 3.15: Step responses of reduced models (Lower Limit) for E.3.5.2.....	55
Figure 3.16: Step responses of reduced models (Upper Limit) for E.3.5.2.....	56
Figure 3.17: Frequency responses of reduced models (Lower Limit) for E.3.5.2...	56
Figure 3.18: Frequency responses of reduced models (Upper Limit) for E.3.5.2..	57
Figure 3.19: Flow diagram of the algorithmic steps for A-RAM.....	59
Figure 3.20: Step responses of reduced models (Lower Limit) for E.3.6.1.....	61
Figure 3.21: Step responses of reduced models (Upper Limit) for E.3.6.1.....	61
Figure 3.22: Frequency responses of reduced models (Lower Limit) for E.3.6.1...	62
Model Order Reduction of Discrete-Time Interval Systems	

Figure 3.23: Frequency responses of reduced models (Upper Limit) for E.3.6.1..62	62
Figure 3.24: Step responses of reduced models (Lower Limit) for E.3.6.2.....64	64
Figure 3.25: Step responses of reduced models (Upper Limit) for E.3.6.2.....64	64
Figure 3.26: Frequency responses of reduced models (Lower Limit) for E.3.6.1...65	65
Figure 3.27: Frequency responses of reduced models (Upper Limit) for E.3.6.2..65	65
Figure 3.28: Flow diagram of the algorithmic steps for E-DRAM.....68	68
Figure 3.29: Step responses of reduced models (Lower Limit) for E.3.7.1.....70	70
Figure 3.30: Step responses of reduced models (Upper Limit) for E.3.7.1.....71	71
Figure 3.31: Frequency responses of reduced models (Lower Limit) for E.3.7.1...71	71
Figure 3.32: Frequency responses of reduced models (Upper Limit) for E.3.7.1..72	72
Figure 3.33: Frequency responses of reduced models (Lower Limit) for E.3.7.2...72	72
Figure 3.34: Frequency responses of reduced models (Upper Limit) for E.3.7.2..73	73
Figure 3.35: Step responses of reduced models (Lower Limit) for E.3.8.1.....76	76
Figure 3.36: Step responses of reduced models (Upper Limit) for E.3.8.1.....77	77
Figure 3.37: Frequency responses of reduced models (Lower Limit) for E.3.8.1...77	77
Figure 3.38: Frequency responses of reduced models (Upper Limit) for E.3.8.1..78	78
Figure 3.39: Step responses of reduced models (Lower Limit) for E.3.8.2.....79	79
Figure 3.40: Step responses of reduced models (Upper Limit) for E.3.8.2.....80	80
Figure 3.41: Frequency responses of reduced models (Lower Limit) for E.3.8.2...80	80
Figure 3.42: Frequency responses of reduced models (Upper Limit) for E.3.8.2..81	81
Figure 3.43: Step responses of reduced models (Lower Limit) for E.3.9.1.....85	85
Figure 3.44: Step responses of reduced models (Upper Limit) for E.3.9.1.....85	85
Figure 3.45: Frequency responses of reduced models (Lower Limit) for E.3.9.1...86	86
Figure 3.46: Frequency responses of reduced models (Upper Limit) for E.3.9.1..86	86
Figure 3.47: Step responses of reduced models (Lower Limit) for E.3.9.2.....87	87
Figure 3.48: Step responses of reduced models (Upper Limit) for E.3.9.2.....87	87
Figure 3.49: Frequency responses of reduced models (Lower Limit) for E.3.9.2...88	88

Figure 3.50: Frequency responses of reduced models (Upper Limit) for E.3.9.2..88	
Figure 3.51: Step responses of reduced models (Lower Limit) for E.3.10.1.....93	
Figure 3.52: Step responses of reduced models (Upper Limit) for E.3.10.1.....93	
Figure 3.53: Frequency responses of reduced models (Lower Limit) for E.3.10.1.94	
Figure 3.54: Frequency responses of reduced models (Upper Limit) for E.3.10.1.....94	
Figure 3.55: Step responses of reduced models (Lower Limit) for E.3.10.2.....96	
Figure 3.56: Step responses of reduced models (Upper Limit) for E.3.10.2.....96	
Figure 3.57: Frequency responses of reduced models (Lower Limit) for E.3.10.2.97	
Figure 3.58: Frequency responses of reduced models (Upper Limit) for E.3.10.2.....97	
Figure 4.1: Step responses of reduced models (Lower Limit) for E.4.2.1.....101	
Figure 4.2: Step responses of reduced models (Upper Limit) for E.4.2.1.....101	
Figure 4.3: Frequency responses of reduced models (Lower Limit) for E.4.2.1...102	
Figure 4.4: Frequency responses of reduced models (Upper Limit) for E.4.2.1..102	
Figure 4.5: Step responses of reduced models (Lower Limit) for E.4.2.2.....103	
Figure 4.6: Step responses of reduced models (Upper Limit) for E.4.2.2.....103	
Figure 4.7: Frequency responses of reduced models (Lower Limit) for E.4.2.2...104	
Figure 4.8: Frequency responses of reduced models (Upper Limit) for E.4.2.2..104	
Figure 4.9: Step responses of reduced models (Lower Limit) for E.4.3.1.....107	
Figure 4.10: Step responses of reduced models (Upper Limit) for E.4.3.1.....107	
Figure 4.11: Frequency responses of reduced models (Lower Limit) for E.4.3.1.108	
Figure 4.12: Frequency responses of reduced models (Upper Limit) for E.4.3.1.....108	
Figure 4.13: Frequency responses of reduced models (Lower Limit) for E.4.3.2.109	

Figure 4.14: Frequency responses of reduced models (Upper Limit) for E.4.3.2.....	109
Figure 4.15: Step responses of reduced models (Lower Limit) for E.4.4.1.....	112
Figure 4.16: Step responses of reduced models (Upper Limit) for E.4.4.1.....	112
Figure 4.17: Frequency responses of reduced models (Lower Limit) for E.4.4.1.....	113
Figure 4.18: Frequency responses of reduced models (Upper Limit) for E.4.4.1.....	113
Figure 4.19: Step responses of reduced models (Lower Limit) for E.4.4.2.....	115
Figure 4.20: Step responses of reduced models (Upper Limit) for E.4.4.2.....	115
Figure 4.21: Frequency responses of reduced models (Lower Limit) for E.4.4.2.....	116
Figure 4.22: Frequency responses of reduced models (Upper Limit) for E.4.4.2.....	116
Figure 4.23: Step responses of reduced models (Lower Limit) for E.4.5.1.....	122
Figure 4.24: Step responses of reduced models (Upper Limit) for E.4.5.1.....	122
Figure 4.25: Frequency responses of reduced models (Lower Limit) for E.4.5.1.....	123
Figure 4.26: Frequency responses of reduced models (Upper Limit) for E.4.5.1.....	123
Figure 5.1: Algorithmic procedure for the assessment.....	128
Figure 5.2: Step responses for reduced models (Lower Limit) for E.5.2.2.2.1....	131
Figure 5.3: Step responses for reduced models (Upper Limit) for E.5.2.2.2.1....	131
Figure 5.4: Step responses for reduced models (Lower Limit) for E.5.2.2.2.2....	132
Figure 5.5: Step responses for reduced models (Upper Limit) for E.5.2.2.2.2....	132