

Table of contents

- **Dedication** (p. v)
- **Preface** (p. 1)
- **Chapter 1 Introduction** (p. 3)
 - **1.1 Basic Concepts** (p. 4)
 - **1.2 Historical Background** (p. 8)
 - **1.3 Summary** (p. 15)
 - **References** (p. 16)
- **Chapter 2 Fault and Fault Modelling** (p. 23)
 - **2.1 Introduction** (p. 23)
 - **2.2 Failure modes in electronic components** (p. 25)
 - **2.3 Analog fault modelling** (p. 27)
 - **2.4 Approximation modelling of analog integrated circuits** (p. 31)
 - **2.5 Summary** (p. 35)
 - **Exercises** (p. 35)
 - **References** (p. 37)
- **Chapter 3 Test Stimulus Generation** (p. 41)
 - **3.1 Introduction** (p. 41)
 - **3.2 Conventional analog test stimulus generation** (p. 44)
 - **3.3 Digital test stimulus generation** (p. 49)
 - **3.4 Delta sigma ([Delta]-[Sigma]) signal generation** (p. 53)
 - **3.5 Pseudorandom noise generation** (p. 60)
 - **3.6 Summary** (p. 67)
 - **Exercises** (p. 68)
 - **References** (p. 69)
- **Chapter 4 Fault Diagnosis Methodology** (p. 73)
 - **4.1 Introduction** (p. 73)
 - **4.2 Fault diagnosis procedure** (p. 74)
 - **4.3 Fault dictionary techniques** (p. 75)
 - **4.4 DSP based techniques** (p. 79)
 - **4.5 Model based observer technique** (p. 82)
 - **4.6 Experimental verification of the model based observer technique** (p. 122)
 - **4.7 Summary** (p. 130)
 - **Exercises** (p. 130)
 - **References** (p. 131)
- **Chapter 5 Design for Testability and Built-in-Self-Test** (p. 133)
 - **5.1 Introduction** (p. 133)
 - **5.2 Design-for-testability approaches** (p. 136)
 - **5.3 Increased testability with test bus** (p. 142)
 - **5.4 Built-in-self-test** (p. 145)
 - **5.5 Summary** (p. 149)
 - **References** (p. 149)
- **Appendix A** (p. 153)
- **Appendix B** (p. 159)

- **Appendix C** (p. 169)
- **Notes** (p. 177)
- **Index** (p. 179)