

- | | |
|-------------------------|--|
| 1. Record Nr. | UNISOBE600200018618 |
| Autore | Northedge, Alastair |
| Titolo | The historical topography of Samarra / Alastair Nothedge |
| Pubbl/distr/stampa | London, : British School of Archaeology in Iraq, 2005 |
| Descrizione fisica | 375 p. : ill. ; 30 cm |
| Collana | Samarra studies ; 1 |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
-
- | | |
|-------------------------|---|
| 2. Record Nr. | UNINA9910484062803321 |
| Autore | Zhu Yunpeng |
| Titolo | Analysis and design of nonlinear systems in the frequency domain / / Yunpeng Zhu |
| Pubbl/distr/stampa | Cham, Switzerland : , : Springer, , [2021]
©2021 |
| ISBN | 3-030-70833-0 |
| Descrizione fisica | 1 online resource (xxi, 164 pages) : illustrations |
| Collana | Springer Theses, Recognizing Outstanding Ph.D. Research |
| Disciplina | 003.75 |
| Soggetti | Nonlinear systems - Mathematical models
Volterra equations
Sistemes no lineals
Models matemàtics
Equacions de Volterra
Llibres electrònics |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di bibliografia | Includes bibliographical references. |
| Nota di contenuto | Intro -- Supervisor's Foreword -- Preface -- Acknowledgements -- |

Contents -- Contributors -- Abbreviations --	1
1 Introduction --	1.1
1.1.1 Modelling of Nonlinear Systems --	1.1.2
1.1.2 Frequency Domain Analysis and Design of Nonlinear Systems --	1.1.3
1.1.3 LS Methods in Nonlinear System Analyses --	1.1.4
1.1.4 Convergence Issues with the Frequency Analysis of Nonlinear Systems --	1.2
1.2 Aim, Objectives and Contributions --	1.3
1.3 Thesis Layout --	References
2 Nonlinear Systems and the Frequency Domain Representations --	2.1
2.1 Introduction --	2.2
2.2 Polynomial Models of Nonlinear Systems --	2.2.1
2.2.1 The NDE Model of Nonlinear Systems --	2.2.2
2.2.2 The Polynomial NARX Model of Nonlinear Systems --	2.2.3
2.2.3 The NARX-M-for-D of Nonlinear Systems --	2.3
2.3 The Frequency Domain Representations of Nonlinear Systems --	2.3.1
2.3.1 The Volterra Series Representation --	2.3.2
2.3.2 The Generalised Frequency Response Functions (GFRFs) of Nonlinear Systems --	2.3.3
2.3.3 The Nonlinear Output Frequency Response Functions (NOFRFs) of Nonlinear Systems --	2.3.4
2.3.4 The Output Frequency Response Function (OFRF) of Nonlinear Systems --	2.4
2.4 Conclusions --	References
3 Generalized Associated Linear Equations (GALEs) with Applications to Nonlinear System Analyses --	3.1
3.1 Introduction --	3.2
3.2 The Associated Linear Equations (ALEs) of Nonlinear Systems --	3.2.1
3.2.1 The ALEs of Duffing Equations --	3.2.2
3.2.2 The ALEs of the NARX Model --	3.3
3.3 The Generalized Associated Linear Equations (GALEs) --	3.3.1
3.3.1 The Concept of the GALEs --	3.3.2
3.3.2 Determination of the GALEs --	3.4
3.4 System Analyses Using the GALEs --	3.4.1
3.4.1 Evaluation of the Output Response of Nonlinear Systems --	3.4.2
3.4.2 Evaluation of the NOFRFs of Nonlinear Systems --	3.4.3
3.4.3 Evaluation of the OFRF of Nonlinear Systems --	3.5
3.5 Application of the GALEs to Nonlinear System Modelling, Fault Diagnosis, and Design.	3.5.1
3.5.1 Application to the Identification of the NDE Model of a Nonlinear System --	3.5.2
3.5.2 Application to the NOFRFs Based Fault Diagnosis --	3.5.3
3.5.3 Application to the OFRFs Based Design of Nonlinear Energy Harvester Systems --	3.6
3.6 Conclusions --	References
4 The Convergence of the Volterra Series Representation of Nonlinear Systems --	4.1
4.1 Introduction --	4.2
4.2 The NARX Model in the Frequency Domain: Nonlinear Output Characteristic Spectra (NOCS) Model --	4.3
4.3 The Generalized Output Bound Characteristic Function (GOBCF) Based Convergence Analysis --	4.3.1
4.3.1 A Sufficient Condition of the Convergence --	4.3.2
4.3.2 The Determination of the GOBCF --	4.3.3
4.3.3 Convergence Analysis of the Volterra Series Representation of Nonlinear Systems --	4.3.4
4.3.4 The Procedure for the New Convergence Analysis --	4.4
4.4 Case Studies --	4.4.1
4.4.1 Case 1-Unplugged Van der Pol Equation --	4.4.2
4.4.2 Case 2-Duffing Oscillator with Cubic Damping --	4.5
4.5 Conclusions --	References
5 The Effects of Both Linear and Nonlinear Characteristic Parameters on the Output Response of Nonlinear Systems --	5.1
5.1 Introduction --	5.2
5.2 The OFRF Based Design of NARX-M-for-D --	5.2.1
5.2.1 The OFRF of the NARX-M-for-D --	5.2.2
5.2.2 The Determination of the OFRF of NARX-M-for-D --	5.2.3
5.2.3 The OFRF Based Design of Nonlinear Systems --	5.3
5.3 The Associated Output Frequency Response Function (AOFRF) --	5.3.1
5.3.1 Explicit Relationships Between the GFRFs and the Parameters of the NARX Model --	5.3.2
5.3.2 Two Special Cases --	5.3.3
5.3.3 The Concept of the Associated Output Frequency Response Function (AOFRF) --	5.3.4
5.3.4 The AOFRF in Terms of the System Linear and Nonlinear Characteristic Parameters --	5.3.5
5.3.5 The AOFRF Based Representation of the Output Frequency Response of Nonlinear Systems --	5.4
5.4 Case Studies --	5.4.1
5.4.1 Case Study 1-The OFRF Based Design of the Vibration Isolation System.	5.4.2
5.4.2 Case Study 2-The AOFRF Based Representation of the Output Spectrum of a Duffing Nonlinear System --	5.5
5.5 Conclusions --	References
6 Nonlinear Damping Based Semi-active Building	

Isolation System -- 6.1 Introduction -- 6.2 Semi-active Damping System for the Sosokan Building -- 6.2.1 The Sosokan Building and Its Model Representation -- 6.2.2 Semi-active Damping System for the Sosokan Building -- 6.3 Nonlinear Damping Based Semi-active Building Vibration Isolation -- 6.4 Simulation Studies -- 6.4.1 Objectives of Nonlinear Damping Design -- 6.4.2 Effects of Nonlinear Damping Coefficient -- 6.4.3 Effects of Ground Excitation Magnitude -- 6.4.4 Isolation Performance on Higher Floors -- 6.4.5 Isolation Performance in Terms of the Roof Drift -- 6.4.6 Isolation Performance in Terms of Harmonics and a Comparison with the Performance Under LQG Control -- 6.5 Experimental Validation -- 6.6 Conclusions -- References -- 7 Conclusions -- 7.1 Main Contributions of the Present Research -- 7.2 Future Works -- Appendix A Sampling Frequency Independence -- Appendix B Proof of Lemma 5.1.
