

1. Record Nr.	UNINA9911019193803321
Titolo	The Duffing equation : nonlinear oscillators and their behaviour // edited by Ivana Kovacic, Michael J. Brennan
Pubbl/distr/stampa	Chichester, West Sussex, : Wiley, 2011
ISBN	9786613373069 9780470977835 0470977833 9781283373067 1283373068 9780470977866 0470977868 9780470977859 047097785X
Descrizione fisica	1 online resource (392 p.)
Altri autori (Persone)	BrennanMichael J <1956-> (Michael John) KovacicIvana <1972->
Disciplina	515.35 515/.35 620.001515355
Soggetti	Duffing equations Nonlinear oscillators - Mathematical models
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	The Duffing Equation: Nonlinear Oscillators and their Behaviour; Contents; Contributors; Preface; 1 Background: On Georg Duffing and the Duffing equation; 1.1 Introduction; 1.2 Historical perspective; 1.3 A brief biography of Georg Duffing; 1.4 The work of Georg Duffing; 1.5 Contents of Duffing's book; 1.5.1 Description of Duffing's book; 1.5.2 Reviews of Duffing's book; 1.6 Research inspired by Duffing's work; 1.6.1 1918-1952; 1.6.2 1962 to the present day; 1.7 Some other books on nonlinear dynamics; 1.8 Overview of this book; References 2 Examples of physical systems described by the Duffing equation 2.1 Introduction; 2.2 Nonlinear stiffness; 2.3 The pendulum; 2.4 Example

of geometrical nonlinearity; 2.5 A system consisting of the pendulum and nonlinear stiffness; 2.6 Snap-through mechanism; 2.7 Nonlinear isolator; 2.7.1 Quasi-zero stiffness isolator; 2.8 Large deflection of a beam with nonlinear stiffness; 2.9 Beam with nonlinear stiffness due to inplane tension; 2.10 Nonlinear cable vibrations; 2.11 Nonlinear electrical circuit; 2.11.1 The electrical circuit studied by Ueda; 2.12 Summary; References

3 Free vibration of a Duffing oscillator with viscous damping3.1

Introduction; 3.2 Fixed points and their stability; 3.2.1 Case when the nontrivial fixed points do not exist (> 0); 3.2.2 Case when the nontrivial fixed points exist (< 0); 3.2.3 Variation of phase portraits depending on linear stiffness and linear damping; 3.3 Local bifurcation analysis; 3.3.1 Bifurcation from trivial fixed points; 3.3.2 Bifurcation from nontrivial fixed points; 3.4 Global analysis for softening nonlinear stiffness (< 0); 3.4.1 Phase portraits; 3.4.2 Global bifurcation analysis 3.5 Global analysis for hardening nonlinear stiffness (> 0)3.5.1 Phase portraits; 3.5.2 Global bifurcation analysis; 3.6 Summary;

Acknowledgments; References; 4 Analysis techniques for the various forms of the Duffing equation; 4.1 Introduction; 4.2 Exact solution for free oscillations of the Duffing equation with cubic nonlinearity; 4.2.1 The frequency and period of free oscillations of the Duffing oscillator; 4.2.2 Discussion; 4.3 The elliptic harmonic balance method; 4.3.1 The Duffing equation with a strong quadratic term; 4.3.2 The Duffing equation with damping

4.3.3 The harmonically excited Duffing oscillator4.3.4 The harmonically excited pure cubic Duffing equation; 4.4 The elliptic Galerkin method; 4.4.1 Duffing oscillator with a strong excitation force of elliptic type; 4.5 The straightforward expansion method; 4.5.1 The Duffing equation with a small quadratic term; 4.6 The elliptic Lindstedt-Poincare method; 4.6.1 The Duffing equation with a small quadratic term; 4.7 Averaging methods; 4.7.1 The generalised elliptic averaging method; 4.7.2 Elliptic Krylov-Bogolubov (EKB) method for the pure cubic Duffing oscillator

4.8 Elliptic homotopy methods

Sommario/riassunto

The Duffing Equation: Nonlinear Oscillators and their Behaviour brings together the results of a wealth of disseminated research literature on the Duffing equation, a key engineering model with a vast number of applications in science and engineering, summarizing the findings of this research. Each chapter is written by an expert contributor in the field of nonlinear dynamics and addresses a different form of the equation, relating it to various oscillatory problems and clearly linking the problem with the mathematics that describe it. The editors and the contributors explain the mathem

2. Record Nr.	UNISANNIORMG0030464
Autore	Cervetti, Fernanda
Titolo	Sicurezza e responsabilità nei cantieri : analisi giuridico-sistematica del D. lgs. n. 494/96 coordinato con il D. lgs. n. 626/94, responsabilità e sanzioni : Decreto legislativo n. 494 del 14 agosto 1996 e circolari interpretative, attuazione della Direttiva 92/57/CEE concernente le prescrizioni minime di sicurezza e di salute da attuare nei cantieri temporanei o mobili / Fernanda Cervetti Spriano
Pubbl/distr/stampa	Milano, : Giuffrè, \1999!
ISBN	8814074917
Descrizione fisica	XI, 212 p. ; 24 cm
Disciplina	344 344.450465
Soggetti	Cantieri edili - Norme di sicurezza
Collocazione	D (AR) 27 024
Lingua di pubblicazione	Italiano
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Segue: Appendice.