

1. Record Nr.	UNINA9910782491403321
Autore	Riaza Ricardo
Titolo	Differential-algebraic systems [[electronic resource]] : analytical aspects and circuit applications / / Ricardo Riaza
Pubbl/distr/stampa	Singapore ; ; Hackensack, NJ, : World Scientific, 2008
ISBN	1-281-93401-1 9786611934019 981-279-181-7
Descrizione fisica	1 online resource (344 p.)
Disciplina	512.56 512/.56 621.3815
Soggetti	Differential-algebraic equations Electric circuits - 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 bibliography (p. 309-324) and index.
Nota di contenuto	Preface; Contents; 1. Introduction; 1.1 Historical remarks: Different origins, different names; 1.2 DAE analysis; 1.2.1 Indices; 1.2.2 Dynamics and singularities; 1.2.3 Numerical aspects; 1.3 State vs. semistate modeling; 1.4 Formulations; 1.4.1 Input-output descriptions; 1.4.2 Leading terms; 1.4.3 Semieexplicit, semilinear and quasilinear DAEs; 1.4.3.1 Semieexplicit and semilinear DAEs; 1.4.3.2 Hessenberg DAEs; 1.4.3.3 Quasilinear DAEs; 1.5 Contents and structure of the book; Analytical aspects of DAEs; 2. Linear DAEs and projector-based methods; 2.1 Linear time-invariant DAEs 2.1.1 Matrix pencils and the Kronecker canonical form 2.1.2 Solving linear time-invariant DAEs via the KCF; 2.1.3 A glance at projector-based techniques; 2.1.3.1 Index one characterization via projectors; 2.1.3.2 Decoupling of linear time-invariant index one DAEs; 2.1.3.3 Geometrical remarks; 2.1.3.4 Higher index problems; 2.1.3.5 Some auxiliary properties of the projectors $P_i$ and $Q_i$ ; 2.2 Properly stated linear time-varying DAEs; 2.2.1 On standard form index one problems; 2.2.2 Properly stated leading terms; 2.2.3 P-projectors: Matrix chain and the tractability index; 2.2.3.1 Matrix chain

2.2.3.2 The tractability index of regular linear DAEs 2.2.4 The - framework; 2.2.4.1 Alternative chain construction; 2.2.4.2 Equivalence of the P- and -chains; 2.2.4.3 Some properties of the projectors  $i$  and  $M_i$ ; 2.2.5 Decoupling; 2.2.6 A tutorial example; 2.2.6.1 Index one; 2.2.6.2 Index two; 2.2.6.3 Index three; 2.2.7 Regular points; 2.3 Standard form linear DAEs; 2.3.1 The tractability index of standard form DAEs; 2.3.2 Decoupling; 2.3.3 Time-invariant problems revisited; 2.4 Other approaches for linear DAEs: Reduction techniques; 3. Nonlinear DAEs and reduction methods  
3.1 Semieexplicit index one DAEs 3.2 Hessenberg systems; 3.3 Some notions from differential geometry; 3.4 Quasilinear DAEs: The geometric index; 3.4.1 The framework of Rabier and Rheinboldt; 3.4.2 Index zero and index one points; 3.4.2.1 Index zero points; 3.4.2.2 Index one points; 3.4.3 Higher index points; 3.4.3.1 Index two points; 3.4.3.2 Index points; 3.4.4 Manifold sequences and locally regular DAEs; 3.4.4.1 Regular manifold, solution manifold, and locally regular DAEs; 3.4.4.2 Manifold sequences within different reduction approaches; 3.4.5 Local equivalence  
3.4.5.1 The index: Independence of reduction pairs and invariance  
3.4.5.2 C-conjugacy of state space descriptions; 3.4.5.3 On the link between local equivalence and reduction operators; 3.4.6 Examples; 3.4.6.1 Semieexplicit index one DAEs; 3.4.6.2 Hessenberg DAEs; 3.4.6.3 A locally regular DAE with different indices; 3.4.7 Nonautonomous problems; 3.4.7.1 Geometric index and reduction in the nonautonomous context; 3.4.7.2 Semieexplicit index one DAEs; 3.4.7.3 Nonautonomous Hessenberg DAEs; 3.4.7.4 Schur reduction and semieexplicit DAEs; 3.5 Dynamical aspects  
3.6 Reduction methods for fully nonlinear DAEs

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#### Sommario/riassunto

Differential-algebraic equations (DAEs) provide an essential tool for system modeling and analysis within different fields of applied sciences and engineering. This book addresses modeling issues and analytical properties of DAEs, together with some applications in electrical circuit theory. Beginning with elementary aspects, the author succeeds in providing a self-contained and comprehensive presentation of several advanced topics in DAE theory, such as the full characterization of linear time-varying equations via projector methods or the geometric reduction of nonlinear systems. Recent resul

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2. Record Nr.	UNINA9910814205203321
Titolo	Changing adolescence : social trends and mental health / / edited by Ann Hagell [[electronic resource]]
Pubbl/distr/stampa	Bristol : , : Policy, , 2012
ISBN	1-4473-0819-0 1-4473-0724-0 1-280-12865-8 9786613532534 1-4473-0105-6
Descrizione fisica	1 online resource (xix, 232 pages) : digital, PDF file(s)
Disciplina	305.2350941
Soggetti	Teenagers - Great Britain - Social conditions - 21st century Adolescent psychology - Great Britain Teenagers - Mental health services - Great Britain
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 02 Sep 2022).
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	8. Some thoughts on the broader context: neighbourhoods and peers Introduction; Neighbourhoods and adolescent mental health; Have young people's neighbourhood experiences changed over recent decades?; The role of peers in neighbourhood effects; Conclusion; 9. Reflections and implications; Our starting point; The assembled evidence; Some integrating themes; Looking forward; Conclusion; References; The Nuffield Foundation's Changing Adolescence Programme; Reference list for primary data sources for graph data in Chapter Seven; Index. Does school matter for mental health? What has changed? Time trends in the structures of secondary education in the UK; What do young people say?; Are there trends in other 'school-related' problems?; Conclusion; 7. Trends in adolescent substance use and their implications for understanding trends in mental health; Introduction; Research questions; What do we mean by 'substance use'?; Methodological considerations; National trends; More recent trends in adolescent alcohol use since 1980; International trends and

comparisons; Overlap and relationship with mental health outcomes; Conclusion.

What does existing research tell us about trends in young people's time use? New analyses of UK data on time trends in young people's time use from 1975-2000; Results; Conclusion; 5. Trends in parenting: can they help explain time trends in problem behaviour? 1; Introduction; What do we mean by 'parenting of adolescents'?; How has parenting changed?; Could trends in family structure account for trends in adolescent problem behaviour?; Implications of trends in parenting; Conclusion; 6. Educational changes and possible links with adolescent well-being: 1970s to 2000s; Introduction.

Demographic differences in adolescent mental health trends Real change or change in reporting?; Conclusion; 3. Stress and mental health in adolescence: interrelationship and time trends; Introduction; What do we mean by 'stress'?; Measurement issues; Particular stressors in adolescence; Stress reactions in adolescence; Stress and mental health: causal links in adolescence?; Time trends in adolescent stress; Conclusion; 4. Trends in adolescent time use in the United Kingdom; Introduction; What do we mean by 'time use' and how is it researched?; What matters about time use?

Changing adolescence; Contents; List of tables and figures; Acronyms and abbreviations; Notes on contributors; Acknowledgements; Foreword; 1. Introduction; Background; Some key terms; Nuffield Foundation Changing Adolescence Programme; Changing context for adolescence in the UK, 1975-2005; Overarching questions and themes; 2. Time trends in young people's emotional and behavioural problems, 1975-2005; Introduction; Trends in adolescent emotional problems; Trends in conduct problems and delinquency; Trends in attention deficit hyperactivity disorder.

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#### Sommario/riassunto

This unique volume brings together the main findings from the Nuffield Foundation's Changing Adolescence Programme and explores how social change may affect young people's behaviour, mental health and transitions toward adulthood.

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