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Nota di contenuto	Chemical Engineering Dynamics; Preface; Organisation of the Book; Acknowledgements; Table of Contents; Nomenclature for Chapters 1 to 4; 1 Basic Concepts; 1.1 Modelling Fundamentals; 1.1.1 Chemical Engineering Modelling; 1.1.2 General Aspects of the Modelling Approach; 1.1.3 General Modelling Procedure; 1.2 Formulation of Dynamic Models; 1.2.1 Material Balance Equations; 1.2.2 Balancing Procedures; 1.2.2.1 Case A . Continuous Stirred-Tank Reactor; 1.2.2.2 Case B . Tubular Reactor; 1.2.2.3 Case C . Coffee Percolator; 1.2.3 Total Material Balances; 1.2.3.1 Case A . Tank Drainage 1.2.4 Component Balances1.2.4.1 Case A . Waste Holding Tank; 1.2.4.2 Case B . Extraction from a Solid by a Solvent; 1.2.5 Energy Balancing; 1.2.5.1 Case A . Continuous Heating in an Agitated Tank; 1.2.5.2 Case B . Heating in a Filling Tank; 1.2.5.3 Case C . Parallel Reaction in a Semi-Continuous Reactor with Large Temperature Changes; 1.2.6

Momentum Balances; 1.2.7 Dimensionless Model Equations; 1.2.7.1 Case A . Continuous Stirred-Tank Reactor (CSTR); 1.2.7.2 Case B . Gas-Liquid Mass Transfer to a Continuous Tank Reactor with Chemical Reaction; 1.3 Chemical Kinetics
 1.3.1 Rate of Chemical Reaction; 1.3.2 Reaction Rate Constant; 1.3.3 Heats of Reaction; 1.3.4 Chemical Equilibrium and Temperature; 1.3.5 Yield, Conversion and Selectivity; 1.4 Microbial Growth Kinetics; 1.5 Mass Transfer Theory; 1.5.1 Stagewise and Differential Mass Transfer Contacting; 1.5.2 Phase Equilibria; 1.5.3 Interphase Mass Transfer; 2 Process Dynamics Fundamentals; 2.1 Signal and Process Dynamics; 2.1.1 Measurement and Process Response; 2.1.1.1 First-Order Response to an Input Step-Change Disturbance; 2.1.1.2 Case A . Concentration Response of a Continuous Flow, Stirred Tank; 2.1.1.3 Case B . Concentration Response in a Continuous Stirred Tank with Chemical Reaction; 2.1.1.4 Case C . Response of a Temperature Measuring Element; 2.1.1.5 Case D . Measurement Lag for Concentration in a Batch Reactor; 2.1.2 Higher-order Responses; 2.1.2.1 Case A . Multiple Tanks in Series; 2.1.2.2 Case B . Response of a Second-Order Temperature Measuring Element; 2.1.3 Pure Time Delay; 2.1.4 Transfer Function Representation; 2.2 Time Constants; 2.2.1 Common Time Constants; 2.2.1.1 Flow Phenomena; 2.2.1.2 Diffusion and Dispersion; 2.2.1.3 Chemical Reaction; 2.2.1.4 Mass Transfer; 2.2.1.5 Heat Transfer; 2.2.2 Application of Time Constants; 2.3 Fundamentals of Automatic Control; 2.3.1 Basic Feedback Control; 2.3.2 Types of Controller Action; 2.3.2.1 On/Off Control; 2.3.2.2 Proportional-Integral-Derivative (PID) Control; 2.3.2.3 Case A . Operation of a Proportional Temperature Controller; 2.3.3 Controller Tuning; 2.3.3.1 Trial and Error Method; 2.3.3.2 Ziegler-Nichols Method; 2.3.3.3 Cohen-Coon Controller Settings; 2.3.3.4 Ultimate Gain Method; 2.3.3.5 Time Integral Criteria; 2.3.4 Advanced Control Strategies; 2.3.4.1 Cascade Control; 2.3.4.2 Feedforward Control; 2.3.4.3 Adaptive Control

Sommario/riassunto

In this book, the reader is guided through the complex study of dynamic chemical engineering systems by the unique combination of a simplified presentation of the fundamental theory (Part 1) and direct hands-on computer experimentation with the provision of 85 accompanying computer-based simulation examples (Part 2) supplied on diskette. The ISIM digital simulation language is very simple to use and its powerful interactive nature enables the readers to create their own simulations, based on their own specific problems. This powerful dynamic ISIM software is ready to run on any DOS pers

2. Record Nr.	UNINA9910784175103321
Autore	Lorenzato Kathy Irvine <1955->
Titolo	Filling a need while making some noise [[electronic resource]] : a music therapist's guide to pediatrics // Kathy Irvine Lorenzato ; foreword by Kay Roskam
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Nota di contenuto	COVER; Filling a Need While While Making Some Noise; Contents; Foreword; Prelude; A note on the text; 1. The Gospel According to Me; # 1 Goal: fun; 2. Is All this Noise Necessary (You Betcha); In the beginning; Child Life; Perfect place for a music therapist; Empowering patients; Respect; Child development; Knowing appropriate parental behavior when you see it; The job is five days/week; 3. The Group Experience; Music therapy group; Safety first - group instruments; Parents in the group; Group songs; Cue the group; Changing the group to fit individual needs; Drum improvisation group; Hussy! 4. The Importance of Being StaffRecognizing the expertise of others; Co-treating; Celebrations; Nurse as ally; I'll do anything; Support your local nurse!; Priority patients; Hierarchy; Be kind to housekeepers; MT assessment - what do you really need to know?; Data collection - less is more; Charting; Rounds; Changing the environment; 5. Getting Specific in the Acute Medical Setting; Common diseases in pediatrics; Bone marrow transplant/stem cell transplant; Isolation; Latex allergies; Child abuse; 6. Tools of the Trade; Piano lessons; Songwriting; Song choosing; Worst ages/best ages; Nicole Back door approachAshley; 7. Welcome to the Broken Hearts Club; Friends; Boundaries; Psychosocial aspects to cancer; Bad times -

relapse; Father and son; 8. The Art of the Family; Hospitalization as a monkey wrench; Siblings; Brothers; Brandy; Funerals; 9. Critical Care Units; Pediatric Intensive Care Unit; DJ; Burn unit; 10. There Are All Kinds of Suffering; Pain and fear; Guided imagery; Cancer treatment changes; A word to parents - you know who you are; 11. Complaint Department; Complaints? Moi?; Adagio for strings - a controlled substance; Religious conversion on pediatrics
Height issues, or size does matter12. Grand Finale (Finally); Toddlers keep you humble; Survival tips; Coda; References; Further Reading; Song Books; Resources; Commonly Used Medical Abbreviations; Index

Sommario/riassunto

This book is an inspiring and engaging nuts-and-bolts guide for music therapists who are interested in working in pediatrics. The author paints a vivid picture of what it's like to work, as a member of support staff in a teaching hospital, with children and families who are facing tremendous health challenges and engaging in music therapy.
