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Autore	Garrett Peter R.
Titolo	The science of defoaming : theory, experiment and applications / / Peter R. Garrett
Pubbl/distr/stampa	Boca Raton : , : CRC Press, , 2014
ISBN	0-429-14548-9 1-62870-629-5 1-4200-6041-4
Edizione	[1st edition]
Descrizione fisica	1 online resource (587 p.)
Collana	Surfactant science series ; ; 155
Disciplina	660.293 660/.293 668.1
Soggetti	Antifoaming agents
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.
Nota di contenuto	Front Cover; Contents; Preface; Author; Chapter 1 - Some General Properties of Foams; Chapter 2 - Experimental Methods for Study of Foam and Antifoam Action; Chapter 3 - Oils at Interfaces: Entry Coefficients, Spreading Coefficients, and Thin Film Forces; Chapter 4 - Mode of Action of Antifoams; Chapter 5 - Effect of Antifoam Concentration on Volumes of Foam Generated by Air Entrainment in Aqueous Solutions; Chapter 6 - Deactivation of Mixed Oil-Particle Antifoams During Dispersal and Foam Generation in Aqueous Media; Chapter 7 - Mechanical Methods for Defoaming Chapter 8 - Antifoams for Detergent ProductsChapter 9 - Control of Foam in Waterborne Latex Paints and Varnishes; Chapter 10 - Antifoams for Gas-Oil Separation in Crude Oil Production; Chapter 11 - Medical Applications of Defoaming; Frequently Used Symbols and Abbreviations; Back Cover
Sommario/riassunto	In the 20 years since the publication of the author's multi-contributor volume on defoaming, a vast amount of new work has been published and many new insights have been revealed. A cohesive, single-authored book, The Science of Defoaming: Theory, Experiment and Applications provides comprehensive coverage of the topic. It describes

	the mode of action of antifoams, presenting the relevant theory and the supporting experimental evidence. Beginning with an introductory chapter that discusses the intrinsic properties of foam, the book then describes experimental methods for measuring foam propert

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Autore	Crawford James A
Titolo	Advanced phase-lock techniques / / James A. Crawford
Pubbl/distr/stampa	Boston, : Artech House, c2007
ISBN	9781596931411 1596931418
Edizione	[1st ed.]
Descrizione fisica	1 online resource (533 p.)
Collana	Artech House microwave library
Disciplina	621.3815/364
Soggetti	Phase-locked loops
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
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Note generali	Description based upon print version of record.
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Nota di contenuto	Preface; CHAPTER 1 Phase-Locked Systems--A High-Level Perspective; 1.1 PHASE-LOCKED LOOP BASICS; 1.2 CONTINUOUS-TIME CONTROL SYSTEM PERSPECTIVE FOR PLLS (HIGH SNR); 1.3 TIME-SAMPLED PLL SYSTEMS (HIGH SNR); 1.4 ESTIMATION THEORETIC PERSPECTIVE (LOW SNR) FOR PLLS; 1.5 SUMMARY; References; CHAPTER 2 Design Notes; 2.1 SUMMARY OF CLASSIC CONTINUOUS-TIME TYPE-2 SECOND-ORDER PLL DESIGN EQUATIONS; 2.2 CONTINUOUS-TIME TYPE-2 FOURTH-ORDER PLLS; 2.3 DISCRETIZED PLLS; 2.4 HYBRID PLLS INCORPORATING SAMPLE-AND-HOLDS; 2.5 COMMUNICATION THEORY; 2.6 SPECTRAL RELATIONSHIPS; 2.7 TRIGONOMETRY. 2.8 LAPLACE TRANSFORMS2.9 Z-TRANSFORMS; 2.10 PROBABILITY AND STOCHASTIC PROCESSES; 2.11 NUMERICAL SIMULATION; 2.12 CALCULUS; 2.13 BUTTERWORTH LOWPASS FILTERS; 2.14 CHEBYSHEV LOWPASS FILTERS; 2.15 CONSTANTS; References; CHAPTER 3 Fundamental Limits; 3.1 PHASE MODULATION AND BESSEL FUNCTIONS; 3.2 HILBERT TRANSFORMS; 3.3 CAUCHY-SCHWARZ INEQUALITY; 3.4 RF FILTERING EFFECTS ON FREQUENCY STABILITY; 3.5 CHEBYSHEV INEQUALITY; 3.6 CHERNOFF BOUND; 3.7 CRAMER-RAO BOUND; 3.8

EIGENFILTERS (OPTIMAL FILTERS); 3.9 FANO BROADBAND MATCHING THEOREM; 3.10 LEESON-SCHERER PHASE NOISE MODEL.
3.11 THERMAL NOISE LIMITS3.12 NYQUIST SAMPLING THEOREM; 3.13 PALEY-WIENER CRITERION; 3.14 PARSEVAL'S THEOREM; 3.15 POISSON SUM; 3.16 TIME-BANDWIDTH PRODUCT; 3.17 MATCHED-FILTERS FOR DETERMINISTIC SIGNALS IN ADDITIVE WHITE GAUSSIAN NOISE (AWGN); 3.18 WEAK LAW OF LARGE NUMBERS; References; Appendix 3A: Maximum-Likelihood Frequency Estimator; Appendix 3B: Phase Probability Density Function for Sine Wave in AWGN; CHAPTER 4 Noise in PLL-Based Systems; 4.1 INTRODUCTION; 4.2 SOURCES OF NOISE; 4.3 POWER SPECTRAL DENSITY CONCEPT FOR CONTINUOUS-TIME STOCHASTIC SIGNALS.
4.4 POWER SPECTRAL DENSITY FOR DISCRETE-TIME SAMPLED SYSTEMS4.5 PHASE NOISE FIRST PRINCIPLES; 4.6 RANDOM PHASE NOISE; 4.7 NOISE IMPRESSION ON TIME AND FREQUENCY SOURCES; References; Appendix 4A: Review of Stochastic Random Processes; Appendix 4B: Accurate Noise Modeling for Computer Simulations; Appendix 4C: Creating Arbitrary Noise Spectra in a Digital Signal Processing Environment; Appendix 4D: Noise in Direct Digital Synthesizers; CHAPTER 5 System Performance; 5.1 SYSTEM PERFORMANCE OVERVIEW; 5.2 INTEGRATED PHASE NOISE; 5.3 LOCAL OSCILLATORS FOR RECEIVE SYSTEMS.
5.4 LOCAL OSCILLATORS FOR TRANSMIT SYSTEMS5.5 LOCAL OSCILLATOR PHASE NOISE IMPACT ON DIGITAL COMMUNICATION ERROR RATE PERFORMANCE; 5.6 PHASE NOISE EFFECTS ON OFDM SYSTEMS; 5.7 PHASE NOISE EFFECTS ON SPREAD-SPECTRUM SYSTEMS; 5.8 PHASE NOISE IMPACT FOR MORE ADVANCED MODULATION WAVEFORMS; 5.9 CLOCK NOISE IMPACT ON DAC PERFORMANCE; 5.10 CLOCK NOISE IMPACT ON ADC PERFORMANCE; References; Appendix 5A: Image Suppression and Error Vector Magnitude; Appendix 5B: Channel Capacity and Cutoff Rate; CHAPTER 6 Fundamental Concepts for Continuous-Time Systems; 6.1 CONTINUOUS VERSUS DISCRETE TIME.

Sommario/riassunto

From cellphones to micrprocessors, to GPS navigation, phase-lock techniques are utilized in most all modern electronic devices. This high-level book takes a systems-level perspective, rather than circuit-level, which differentiates it from other books in the field.