

1. Record Nr.	UNISA996466768003316
Autore	Hino Yoshiyuki
Titolo	Functional differential equations with infinite delay // Yoshiyuki Hino, Satoru Murakami, Toshiki Naito
Pubbl/distr/stampa	Berlin ; ; Heidelberg : , : Springer-Verlag, , [1991] ©1991
ISBN	3-540-47388-2
Edizione	[1st ed. 1991.]
Descrizione fisica	1 online resource (X, 318 p.)
Collana	Lecture Notes in Mathematics ; ; 1473
Disciplina	515.75
Soggetti	Functional equations
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Phase Spaces -- Fundamental theorems -- Stieltjes integrals and linear operators on ? -- General linear systems -- Linear autonomous systems -- Linear periodic systems -- Fading memory spaces and functional differential equations -- Stabilities in perturbed systems and limiting equations -- Existence of periodic solutions and almost periodic solutions.
Sommario/riassunto	In the theory of functional differential equations with infinite delay, there are several ways to choose the space of initial functions (phase space); and diverse (duplicated) theories arise, according to the choice of phase space. To unify the theories, an axiomatic approach has been taken since the 1960's. This book is intended as a guide for the axiomatic approach to the theory of equations with infinite delay and a culmination of the results obtained in this way. It can also be used as a textbook for a graduate course. The prerequisite knowledge is foundations of analysis including linear algebra and functional analysis. It is hoped that the book will prepare students for further study of this area, and that will serve as a ready reference to the researchers in applied analysis and engineering sciences.

2. Record Nr.	UNINA9910817073603321
Autore	Sackinger Eduard <1959->
Titolo	Broadband circuits for optical fiber communication // Eduard Sackinger
Pubbl/distr/stampa	Hoboken, N.J., : Wiley, c2005
ISBN	9786610275762 9781280275760 1280275766 9780470360576 0470360577 9780471726401 0471726400 9780471726395 0471726397
Edizione	[1st ed.]
Descrizione fisica	1 online resource (454 p.)
Disciplina	621.382/75
Soggetti	Fiber optics Optical communications - Equipment and supplies Broadband amplifiers Integrated circuits - Very large scale integration
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 (p. 407-424) and index.
Nota di contenuto	Broadband Circuits for Optical Fiber Communication; Preface; Contents; I Introduction; 2 Optical Fiber; 2.1 Loss and Bandwidth; 2.2 Dispersion; 2.3 Nonlinearities; 2.4 Pulse Spreading due to Chromatic Dispersion; 2.5 Summary; 2.6 Problems; 3 Photodetectors; 3.1 p-i-n Photodetector; 3.2 Avalanche Photodetector; 3.3 p-i-n Detector with Optical Preamplifier; 3.4 Summary; 3.5 Problems; 4 Receiver Fundamentals; 4.1 Receiver Model; 4.2 Bit-Error Rate; 4.3 Sensitivity; 4.4 Personick Integrals; 4.5 Power Penalty; 4.6 Bandwidth; 4.7 Adaptive Equalizer; 4.8 Nonlinearity; 4.9 Jitter 4.10 Decision Threshold Control4.11 Forward Error Correction; 4.12 Summary; 4.13 Problems; 5 Transimpedance Amplifiers; 5.1 TIA Specifications; 5.1.1 Transimpedance; 5.1.2 Input Overload Current;

5.1.3 Maximum Input Current for Linear Operation; 5.1.4 Input-Referred Noise Current; 5.1.5 Bandwidth and Group-Delay Variation; 5.2 TIA Circuit Concepts; 5.2.1 Low- and High-Impedance Front-Ends; 5.2.2 Shunt Feedback TIA; 5.2.3 Noise Optimization; 5.2.4 Adaptive Transimpedance; 5.2.5 Post Amplifier; 5.2.6 Common-Base/Gate Input Stage; 5.2.7 Current-Mode TIA; 5.2.8 Active-Feedback TIA; 5.2.9 Inductive Input Coupling; 5.2.10 Differential TIA and Offset Control; 5.2.11 Burst-Mode TIA; 5.2.12 Analog Receiver; 5.3 TIA Circuit Implementations; 5.3.1 MESFET and HFET Technology; 5.3.2 BJT, BiCMOS, and HBT Technology; 5.3.3 CMOS Technology; 5.4 Product Examples; 5.5 Research Directions; 5.6 Summary; 5.7 Problems; 6 Main Amplifiers; 6.1 Limiting vs. Automatic Gain Control (AGC); 6.2 MA Specifications; 6.2.1 Gain; 6.2.2 Bandwidth and Group-Delay Variation; 6.2.3 Noise Figure; 6.2.4 Input Dynamic Range; 6.2.5 Input Offset Voltage; 6.2.6 Low-Frequency Cutoff; 6.2.7 AM-to-PM Conversion; 6.3 MA Circuit Concepts; 6.3.1 Multistage Amplifier; 6.3.2 Techniques for Broadband Stages; 6.3.3 Offset Compensation; 6.3.4 Automatic Gain Control; 6.3.5 Loss of Signal Detection; 6.3.6 Burst-Mode Amplifier; 6.4 MA Circuit Implementations; 6.4.1 MESFET and HFET Technology; 6.4.2 BJT and HBT Technology; 6.4.3 CMOS Technology; 6.5 Product Examples; 6.6 Research Directions; 6.7 Summary; 6.8 Problems; 7 Optical Transmitters; 7.1 Transmitter Specifications; 7.2 Lasers; 7.3 Modulators; 7.4 Limits in Optical Communication Systems; 7.5 Summary; 7.6 Problems; 8 Laser and Modulator Drivers; 8.1 Driver Specifications; 8.1.1 Modulation and Bias Current Range (Laser Drivers); 8.1.2 Output Voltage Range (Laser Drivers); 8.1.3 Modulation and Bias Voltage Range (Modulator Drivers); 8.1.4 Power Dissipation; 8.1.5 Rise and Fall Times; 8.1.6 Pulse-Width Distortion; 8.1.7 Jitter Generation; 8.1.8 Eye-Diagram Mask Test; 8.2 Driver Circuit Concepts; 8.2.1 Current-Steering Output Stage; 8.2.2 Back Termination; 8.2.3 Predriver; 8.2.4 Pulse-Width Control; 8.2.5 Data Retiming; 8.2.6 Automatic Power Control (Lasers); 8.2.7 End-of-Life Detection (Lasers); 8.2.8 Automatic Bias Control (MZ Modulators)

## Sommario/riassunto

An expert guide to the new and emerging field of broadband circuits for optical fiber communication. This exciting publication makes it easy for readers to enter into and deepen their knowledge of the new and emerging field of broadband circuits for optical fiber communication. The author's selection and organization of material have been developed, tested, and refined from his many industry courses and seminars. Five types of broadband circuits are discussed in detail: \* Transimpedance amplifiers \* Limiting amplifiers \* Automatic gain control (AGC) amplifiers \* Lasers driver