1. Record Nr. UNISA990001201030203316

Autore	KALMAN, RUDOLF E.
Titolo	Topics in mathematical system theory / Rudolf E. Kalman, Peter L. Falb, Machael A. Arbib
Pubbl/distr/stampa	New Delhi : McGraw-Hill, 1974
Descrizione fisica	XIV, 348 p. : ill. ; 23 cm.
Altri autori (Persone)	FALB, PETER L. ARBIB, Michael A.
Disciplina	519.9
Collocazione	519.9 KAL
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr. UNINA9910427687303321

Autore	Bortsov Alexander A.
Titolo	Laser optoelectronic oscillators / / Alexander A. Bortsov, Sergey M. Smolskiy, Yuri B. Il'in
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2020] ©2020
ISBN	3-030-45700-1
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (XXXV, 522 p. 203 illus., 5 illus. in color.)
Collana	Springer Series in Optical Sciences, , 0342-4111 ; ; 232
Disciplina	621.381045
Soggetti	Optoelectronic devices - Reliability Lasers
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Introduction -- Chapter 2. Nanostructural Optoelectronic Oscillators with the Fiber-Optical Delay Line -- Chapter 3. Modulation

Methods of Laser Emission in Optoelectronic oscillator (OEO) and OEO Differential Equations -- Chapter 4. Semiclassical Theory and Laser Differential Equations for Optoelectronic oscillator (OEO) Analysis. -- Chapter 5. Optoelectronic oscillator (OEO) Differential Equations as the Laser System with Modulation and Positive Feedback -- Chapter 6. Operation Analysis of Optoelectronic oscillator (OEO) with External Mach–Zehnder Modulator. -- Chapter 7. Optoelectronic oscillator (OEO) as the Time and Spatial Correlator of Random Variables with Differential Delay Line -- Chapter 8. Experimental Investigations and Practical Circuits of Optoelectronic oscillator (OEO) with RF FODL.

Sommario/riassunto

This book is devoted to the theoretical and experimental investigation of the optoelectronic oscillator (OEO) with direct and external modulation of laser emission. Such devices, sources of precision radio frequency oscillations using laser excitation, are novel and technologically relevant, with manifold possible applications. It includes a review of the present state of the theory and generation techniques in microwave and mm-wave ranges for traditional and optoelectronic oscillators, description of OEO construction and operation principles, theoretical oscillation analysis and mathematical description of the relevant semi-classical laser physics, and investigation of the power spectral density of noises. Technical features and advantages of OEOs with external and direct modulation of laser emission are discussed together with functional diagrams. The characteristics of OEOs are compared with other traditional RF oscillators, such as quartz, surface acoustic waves, and oscillators with electromagnetic wave cavities. Special attention is paid to Q-factors and phase noises of RF carriers at small offsets. The authors discuss the technical characteristics of modern optoelectronic methods for precision RF oscillation formation, such as commercial large-dimension and compact quantum frequency standards with optical pumping on cesium and rubidium cells. This book is aimed at scientists and engineers in academia and industry who work with sources of microwave and mm-wave signals.

3. Record Nr. UNINA9910372782203321

Autore	Zhao Guodong
Titolo	Internet of Things and Sensors Networks in 5G Wireless Communications
Pubbl/distr/stampa	MDPI - Multidisciplinary Digital Publishing Institute, 2020
ISBN	3-03928-149-6
Descrizione fisica	1 online resource (222 p.)
Soggetti	History of engineering and technology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	The Internet of Things (IoT) has attracted much attention from society, industry and academia as a promising technology that can enhance day to day activities, and the creation of new business models, products and services, and serve as a broad source of research topics and ideas. A future digital society is envisioned, composed of numerous wireless connected sensors and devices. Driven by huge demand, the massive IoT (mIoT) or massive machine type communication (mMTC) has been identified as one of the three main communication scenarios for 5G. In addition to connectivity, computing and storage and data management are also long-standing issues for low-cost devices and sensors. The book is a collection of outstanding technical research and industrial papers covering new research results, with a wide range of features within the 5G-and-beyond framework. It provides a range of discussions of the major research challenges and achievements within this topic.