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Autore	Purkayastha Basab Bijoy
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Introduction -- Transmitter Receiver Techniques -- Modulation Techniques and Signal Processing -- Basic Considerations of PLL and Its Types -- Digital Phased Locked Loop -- Synchronization -- A Zero Crossing Algorithm based Digital Phase Locked Loop -- Least Square Polynomial Fitting based Digital Phase Locked Loop -- A DPLL based Recovery System for Nakagami-m Fading Channel -- Coding Assisted Carrier and Symbol Recovery using DPLL -- Carrier Phase Detection of Rayleigh and Rician Faded Signals using Digital Phase Locked Loop -- DPLL based Square Loop for Carrier Synchronization over Fading Channel -- Conclusions and Future Direction.
Sommario/riassunto	The book reports two approaches of implementation of the essential components of a Digital Phase Locked Loop based system for dealing with wireless channels showing Nakagami-m fading. It is mostly observed in mobile communication. In the first approach, the structure of a Digital phase locked loop (DPLL) based on Zero Crossing (ZC)

algorithm is proposed. In a modified form, the structure of a DPLL based systems for dealing with Nakagami-m fading based on Least Square Polynomial Fitting Filter is proposed, which operates at moderate sampling frequencies. A sixth order Least Square Polynomial Fitting (LSPF) block and Roots Approximator (RA) for better phase-frequency detection has been implemented as a replacement of Phase Frequency Detector (PFD) and Loop Filter (LF) of a traditional DPLL, which has helped to attain optimum performance of DPLL. The results of simulation of the proposed DPLL with Nakagami-m fading and QPSK modulation is discussed in detail which shows that the proposed method provides better performance than existing systems of similar type.