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Sommario/riassunto

Introducing a new, pioneering approach to integrated circuit design, *Nanometer Frequency Synthesis Beyond Phase-Locked Loop* introduces an innovative new way of looking at frequency that promises to open new frontiers in modern integrated circuit (IC) design. While most books on frequency synthesis deal with the phase-locked loop (PLL), this book focuses on the clock signal. It revisits the concept of frequency, solves longstanding problems in on-chip clock generation, and presents a new time-based information processing approach for future chip design. Beginning with the basics, the book explains how clock signal is used in electronic applications and outlines the shortcomings of conventional frequency synthesis techniques for dealing with clock generation problems. It introduces the breakthrough concept of Time-Average-Frequency, presents the Flying-Adder circuit architecture for the implementation of this approach, and reveals a new circuit device, the Digital-to-Frequency Converter (DFC). Lastly, it builds upon these three key components to explain the use of time rather than level to represent information in signal processing. Provocative, inspiring, and chock-full of ideas for future innovations, the book features:

- A new way of thinking about the fundamental concept of clock frequency.
- A new circuit architecture for frequency synthesis: the Flying-Adder direct period synthesis.
- A new electronic component: the Digital-to-Frequency Converter.
- A new information processing approach: time-based vs. level-based.

Examples demonstrating the power of this technology to build better, cheaper, and faster systems. Written with the intent of showing readers how to think outside the box, *Nanometer Frequency Synthesis Beyond the Phase-Locked Loop* is a must-have resource for IC design engineers and researchers as well as anyone who would like to be at the forefront of modern circuit design.

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Sommario/riassunto

This book provides an evidence-based approach for the clinical use of nutraceuticals in the prevention and management of cardiovascular disease. It examines cardiovascular disease epidemiology, risk factors, and the role of dietary patterns. Clinical chapters discuss the use of nutraceuticals in the management of medical conditions such as dyslipidemia, hypertension, insulin resistance, and heart failure. Each chapter contains a short epidemiological background; a list of relevant active compounds and their efficacy, tolerability, and safety; and suggestions for prescribers. This book is a practical guide with the best clinical evidence supporting the use of nutraceuticals in cardiology.

Nutraceuticals and Cardiovascular Disease: An Evidence-based Approach for Clinical Practice is an essential resource for physicians, residents, fellows, and medical students in cardiology, clinical nutrition, dietetics, and internal medicine.
