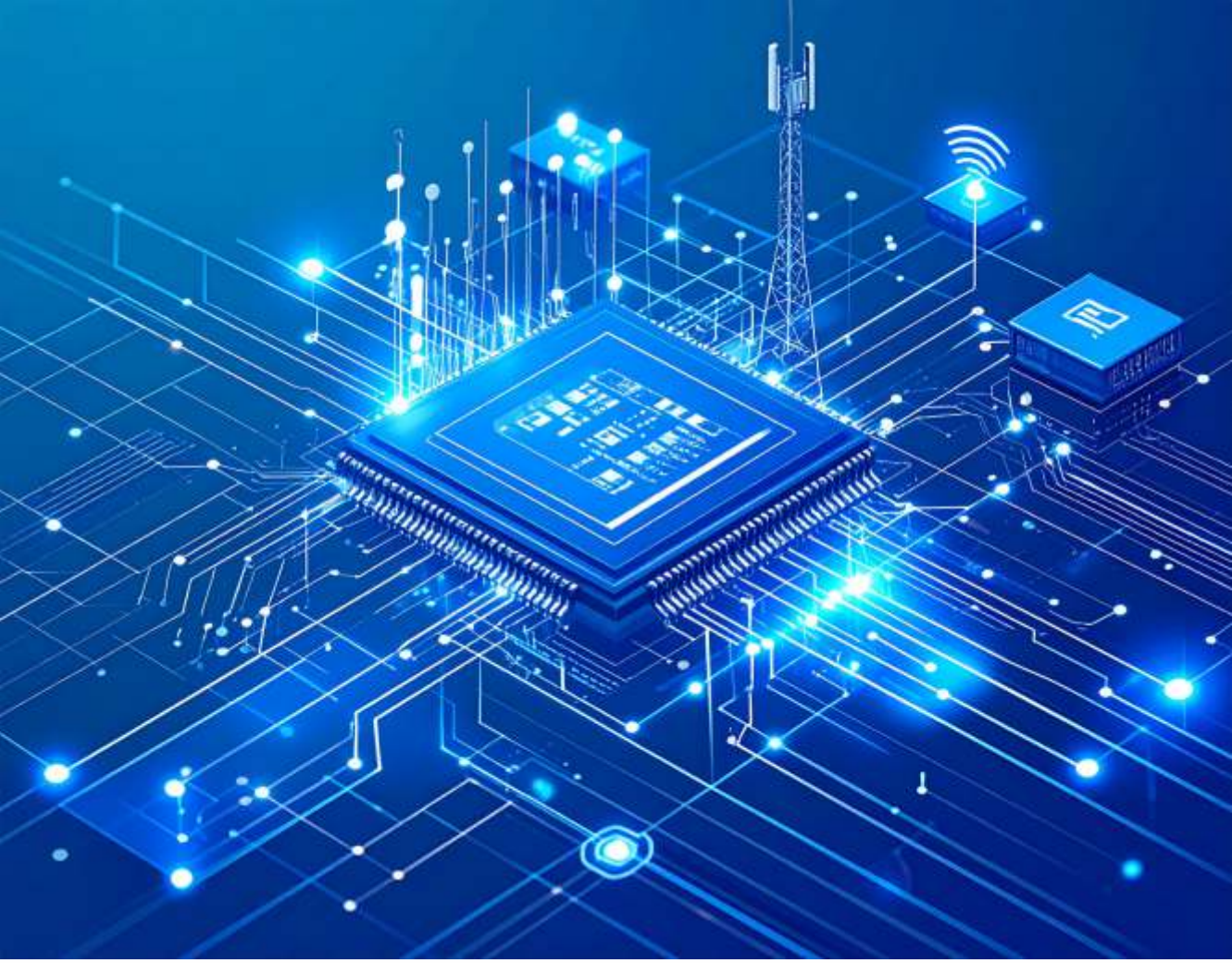

Advanced Communication Systems and Next-Gen Circuit Design

Intelligent Integration of Electronics, Wireless Infrastructure, and Smart Computing Systems

Goutham Kumar Sheelam

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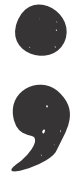

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Preface

The rapid convergence of electronics, wireless communication, and intelligent computing is reshaping the technological landscape, demanding new approaches to circuit design and communication infrastructure. Advanced Communication Systems and Next-Gen Circuit Design: Intelligent Integration of Electronics, Wireless Infrastructure, and Smart Computing Systems addresses this transformative era by exploring the fusion of cutting-edge hardware design, adaptive software systems, and intelligent networking technologies. This book aims to bridge the gap between foundational principles and emerging innovations, offering readers a comprehensive view of how advanced communication systems are built and optimized for future needs. From low-power, high-performance integrated circuits to intelligent wireless protocols and machine-learning-assisted design methodologies, we highlight the interconnected evolution of technologies that define the next generation of systems.

Whether you are a researcher, engineer, or graduate student, this book is structured to guide you through both theoretical insights and practical implementations. Each chapter provides in-depth discussions, real-world case studies, and future-oriented perspectives designed to inspire innovation and deeper inquiry. In a world increasingly driven by autonomous systems, smart environments, and ubiquitous connectivity, mastering the synergy between hardware and software is no longer optional, it is essential. We hope this book serves as both a foundational reference and a forward-looking guide for those committed to designing and deploying the intelligent systems that will power the future.

Goutham Kumar Sheelam

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