

1. Record Nr.	UNINA9910574861203321
Autore	Chakravarthi Veena S.
Titolo	SoC Physical Design : A Comprehensive Guide // by Veena S. Chakravarthi, Shivananda R. Koteswar
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	9783030981129 3030981126
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (173 pages)
Disciplina	004.16 621.395
Soggetti	Electrical engineering Electronic circuit design Electronic circuits Electronics Embedded computer systems Electrical and Electronic Engineering Electronics Design and Verification Electronic Circuits and Systems Electronics and Microelectronics, Instrumentation Embedded Systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Introduction -- SoC Physical Design Flow and Algorithms -- Physical Design Floor Plan and Placement -- Clock, Reset, and HFN -- Physical Design Routing -- Physical Design Verification.
Sommario/riassunto	SoC Physical Design is a comprehensive practical guide for VLSI designers that thoroughly examines and explains the practical physical design flow of system on chip (SoC). The book covers the rationale behind making design decisions on power, performance, and area (PPA) goals for SoC and explains the required design environment algorithms, design flows, constraints, handoff procedures, and design infrastructure requirements in achieving them. The book reveals

challenges likely to be faced at each design process and ways to address them in practical design environments. Advanced topics on 3D ICs, EDA trends, and SOC trends are discussed in later chapters. Coverage also includes advanced physical design techniques followed for deep submicron SOC designs. The book provides aspiring VLSI designers, practicing design engineers, and electrical engineering students with a solid background on the complex physical design requirements of SoCs which are required to contribute effectively in design roles. Provides a comprehensive overview of the skills required for complex SoC design and development; Examines SOC design challenges in nanotechnology scales; Offers readers professional “tricks” to using tools for optimal design runs.
