1. Record Nr. UNINA9910337471303321

Autore	Keszocze Oliver
Titolo	Exact Design of Digital Microfluidic Biochips / / by Oliver Keszocze, Robert Wille, Rolf Drechsler
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-319-90936-3
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (IX, 134 p. 66 illus., 45 illus. in color.)
Disciplina	621.3815
Soggetti	Electronic circuits Microprocessors Electronics Microelectronics Circuits and Systems Processor Architectures Electronics and Microelectronics, Instrumentation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1: Introduction -- Chapter 2: Background -- Chapter 3: Routing -- Chapter 4: Pin Assignment -- Chapter 5: Pin-aware Routing and Extensions -- Chapter 6: One-Pass Design -- Chapter 7: Conclusion and Future Work.
Sommario/riassunto	This book presents exact, that is minimal, solutions to individual steps in the design process for Digital Microfluidic Biochips (DMFBs), as well as a one-pass approach that combines all these steps in a single process. All of the approaches discussed are based on a formal model that can easily be extended to cope with further design problems. In addition to the exact methods, heuristic approaches are provided and the complexity classes of various design problems are determined. Presents exact methods to tackle a variety of design problems for Digital Microfluidic Biochips (DMFBs); Describes an holistic, one-pass approach solving different design steps all at once; Based on a formal model of DMFBs that is easily adaptable to deal with further design tasks.