1. Record Nr.   UNINA9910299494203321

   Autore   Lu Xiao

   Titolo   Trace-based post-silicon validation for VLSI circuits / / Xiao Lu and
                        Qiang Xu

   Pubbl/distr/stampa   New York, : Springer, 2013

   ISBN   3-319-00533-2

   Edizione   [1st ed. 2014.]

   Descrizione fisica   1 online resource (118 p.)

   Collana   Lecture notes in electrical engineering ; ; 252

   Altri autori (Persone) XuQiang

   Disciplina   621.395

   Soggetti   Electrical engineering
                        Silicon

   Lingua di pubblicazione Inglese

   Formato   Materiale a stampa

   Livello bibliografico Monografia

   Note generali   Description based upon print version of record.

   Nota di bibliografia Includes bibliographical references and index.

   Nota di contenuto   Introduction -- State of the Art on Post-Silicon Validation -- Signal
                        Selection for Visibility Enhancement -- Multiplexed Tracing for Design
                        Error -- Tracing for Electrical Error -- Reusing Test Access Mechanisms
                        -- Interconnection Fabric for Flexible Tracing -- Interconnection Fabric
                        for Systematic Tracing -- Conclusion.

   Sommario/riassunto   This book first provides a comprehensive coverage of state-of-the-art
                        validation solutions based on real-time signal tracing to guarantee the
                        correctness of VLSI circuits. The authors discuss several key challenges
                        in post-silicon validation and provide automated solutions that are
                        systematic and cost-effective. A series of automatic tracing solutions
                        and innovative design for debug (DfD) techniques are described,
                        including techniques for trace signal selection for enhancing visibility
                        of functional errors, a multiplexed signal tracing strategy for improving
                        functional error detection, a tracing solution for debugging electrical
                        errors, an interconnection fabric for increasing data bandwidth and
                        supporting multi-core debug, an interconnection fabric design and
                        optimization technique to increase transfer flexibility and a DfD design
                        and associated tracing solution for improving debug efficiency and
                        expanding tracing window. The solutions presented in this book
                        improve the validation quality of VLSI circuits, and ultimately enable the
                        design and fabrication of reliable electronic devices. ·   Provides a
                        comprehensive summary of state-of-the-art on post-silicon validation;
                        ·   Offers automated solutions that are systematic and cost-

effective for post-silicon validation, from trace signal selection to trace data transfer; · Illustrate key concepts and algorithms with real examples. .