Record Nr. UNINA9910437911303321 Embedded systems design with FPGAs / / Peter Athanas, Dionisios **Titolo** Pnevmatikatos, Nicolas Sklavos, editors Pubbl/distr/stampa New York, : Springer, 2013 **ISBN** 1-283-93351-9 1-4614-1362-1 [1st ed. 2013.] Edizione Descrizione fisica 1 online resource (281 p.) Altri autori (Persone) AthanasPeter **Pnevmatikatos**Dionisios SklavosNicolas Disciplina 621.3815 Soggetti Embedded computer systems Field programmable gate arrays 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 Preface -- Widening the Memory Bottleneck by Automatically-Compiled Application-Specific Speculation Mechanisms -- Decimal Division using the Newton-Raphson Method and Radix-1000 Arithmetic -- Lifetime Reliability Sensing In Modern FPGAs -- Model-Based Performance Evaluation of Dynamic Partial Reconfigurable FPGAs -- Switch design for soft interconnection networks -- Embedded Systems Start-up under Timing Constraints on Modern FPGAs -- Run-Time Scalable Architecture for Deblocking Filtering in H.264/AVC - SVC Video Codecs -- CAPH: A Language for Implementing Stream-Processing Applications on FPGAs -- Compact Clefia Implementation on FPGAs -- A Systematic Method to Evaluate and Compare the Performance of Physical Unclonable Functions. Sommario/riassunto This book presents methodologies for modern applications of embedded systems design, using field programmable gate array (FPGA) devices. Coverage includes state-of-the-art research from academia and industry on a wide range of topics, including advanced electronic design automation (EDA), novel system architectures, embedded processors, arithmetic, dynamic reconfiguration and applications.

Describes a variety of methodologies for modern embedded systems

design; Implements methodologies presented on FPGAs; Covers a wide variety of applications for reconfigurable embedded systems, including Bioinformatics, Communications and networking, Application acceleration, Medical solutions, Experiments for high energy physics, Astronomy, Aerospace, Biologically inspired systems and Computational fluid dynamics (CFD).