Record Nr. UNINA9910299847503321 Autore Soeken Mathias Titolo Formal Specification Level [[electronic resource]]: Concepts, Methods, and Algorithms / / by Mathias Soeken, Rolf Drechsler Pubbl/distr/stampa Cham: .: Springer International Publishing: .: Imprint: Springer, . 2015 **ISBN** 3-319-08699-5 Edizione [1st ed. 2015.] 1 online resource (143 p.) Descrizione fisica 004.1 Disciplina 620 621.3815 Soggetti Electronic circuits Microprocessors Circuits and Systems **Processor Architectures** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Introduction -- Background -- NLP-Assisted Model Generation --Verification of Static Aspects -- Verification of Dynamic Aspects --Conclusions. Sommario/riassunto This book introduces a new level of abstraction that closes the gap between the textual specification of embedded systems and the executable model at the Electronic System Level (ESL). Readers will be enabled to operate at this new, Formal Specification Level (FSL), using models which not only allow significant verification tasks in this early stage of the design flow, but also can be extracted semi-automatically from the textual specification in an interactive manner. The authors explain how to use these verification tasks to check conceptual properties, e.g. whether requirements are in conflict, as well as

dynamic behavior, in terms of execution traces. • Serves as a single-source reference to a new level of abstraction for embedded systems, known as the Formal Specification Level (FSL); • Provides a variety of use cases which can be adapted to readers' specific design flows; • Includes a comprehensive illustration of Natural Language Processing

(NLP) techniques, along with examples of how to implement and apply these techniques in the design of embedded systems.