1. Record Nr. UNINA9910299580103321 Autore Przigoda Nils **Titolo** Automated Validation & Verification of UML/OCL Models Using Satisfiability Solvers / / by Nils Przigoda, Robert Wille, Judith Przigoda, Rolf Drechsler Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2018 3-319-72814-8 ISBN Edizione [1st ed. 2018.] 1 online resource (XII, 255 p. 16 illus., 5 illus. in color.) Descrizione fisica 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 bibliografia Includes bibliographical references. Sommario/riassunto This book provides a comprehensive discussion of UML/OCL methods and design flow, for automatic validation and verification of hardware and software systems. While the presented flow focuses on using satisfiability solvers, the authors also describe how these methods can be used for any other automatic reasoning engine. Additionally, the design flow described is applied to a broad variety of validation and

verification tasks. The authors also cover briefly how non-functional

properties such as timing constraints can be handled with the described flow. Provides a general flow and description for the validation and verification of UML/OCL models; Demonstrates a detailed realization of the general flow using satisfiability solvers; Includes a case study that presents the possibilities of the state-of-

the-art approaches.