Record Nr. UNINA9910767508103321 25 years of model checking: history, achievements, perspectives // **Titolo** Orna Grumberg, Helmut Veith (eds.) Pubbl/distr/stampa Berlin, : Springer, 2008 **ISBN** 3-540-69850-7 Edizione [1st ed. 2008.] 1 online resource (VII, 234 p.) Descrizione fisica Collana Lecture notes in computer science, , 0302-9743; ; 5000 LNCS sublibrary. SL 1, Theoretical computer science and general issues Classificazione **DAT 003f DAT 325f DAT 540f** SS 4800 Altri autori (Persone) GrumbergOrna VeithHelmut 005.131 Disciplina Soggetti Computer systems - Verification Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico "This volume presents a collection of invited papers based on talks at Note generali the symposium "25 Years of Model Checking (25MC)"--Pref. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto The Birth of Model Checking -- The Beginning of Model Checking: A Personal Perspective -- Verification Technology Transfer -- New Challenges in Model Checking -- A Retrospective on Mur? -- Model Checking: From Tools to Theory -- Value Iteration -- Fifteen Years of Formal Property Verification in Intel -- A View from the Engine Room: Computational Support for Symbolic Model Checking -- From Church and Prior to PSL -- On the Merits of Temporal Testers -- DESIGN AND SYNTHESIS OF SYNCHRONIZATION SKELETONS USING BRANCHING TIME TEMPORAL LOGIC -- SPECIFICATION AND VERIFICATION OF CONURRENT SYSTEMS IN CESAR. Sommario/riassunto Model checking technology is among the foremost applications of logic to computer science and computer engineering. The model checking community has achieved many breakthroughs, bridging the gap between theoretical computer science and hardware and software engineering, and it is reaching out to new challenging areas such as

system biology and hybrid systems. Model checking is extensively used in the hardware industry and has also been applied to the verification

of many types of software. Model checking has been introduced into computer science and electrical engineering curricula at universities worldwide and has become a universal tool for the analysis of systems. This Festschrift volume, published in celebration of the 25th Anniversary of Model Checking, includes a collection of 11 invited papers based on talks at the symposium "25 Years of Model Checking", 25MC, which was part of the 18th International Conference on Computer Aided Verification (CAV 2006), which in turn was part of the Federated Logic Conference (FLoC 2006) held in Seattle, WA, USA, in August 2006. Model checking is currently attracting considerable attention beyond the core technical community, and the ACM Turing Award 2007 was given in recognition of the paradigm-shifting work on this topic initiated a quarter century ago. Here we honor that achievement with the inclusion of facsimile reprints of the visionary papers on model checking by Edmund Clarke and Allen Emerson, and by Jean-Pierre Queille and Joseph Sifakis.