1. Record Nr.   UNINA9910299586103321

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   Titolo   Automatic Tuning of Compilers Using Machine Learning / / by Amir H.
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   Pubbl/distr/stampa Cham : , : Springer International Publishing : , : Imprint : Springer, ,
                      2018

   ISBN   3-319-71489-9

   Edizione   [1st ed. 2018.]

   Descrizione fisica 1 online resource (XVII, 118 p. 23 illus., 6 illus. in color.)

   Collana   PoliMI SpringerBriefs, , 2282-2577

   Disciplina   005.453

   Soggetti   Computational intelligence
                      Programming languages (Electronic computers)
                      Computer simulation
                      Artificial intelligence
                      Computational Intelligence
                      Programming Languages, Compilers, Interpreters
                      Simulation and Modeling
                      Artificial Intelligence

   Lingua di pubblicazione Inglese

   Formato   Materiale a stampa

   Livello bibliografico Monografia

   Nota di bibliografia Includes bibliographical references at the end of each chapters and
                      index.

   Nota di contenuto Background -- DSE Approach for Compiler Passes -- Addressing the
                      Selection Problem of Passes using ML -- Intermediate Speedup
                      Prediction for the Phase-ordering Problem -- Full-sequence Speedup
                      Prediction for the Phase-ordering Problem -- Concluding Remarks. .

   Sommario/riassunto This book explores break-through approaches to tackling and
                      mitigating the well-known problems of compiler optimization using
                      design space exploration and machine learning techniques. It
                      demonstrates that not all the optimization passes are suitable for use
                      within an optimization sequence and that, in fact, many of the available
                      passes tend to counteract one another. After providing a
                      comprehensive survey of currently available methodologies, including
                      many experimental comparisons with state-of-the-art compiler
                      frameworks, the book describes new approaches to solving the
                      problem of selecting the best compiler optimizations and the phase-

ordering problem, allowing readers to overcome the enormous complexity of choosing the right order of optimizations for each code segment in an application. As such, the book offers a valuable resource for a broad readership, including researchers interested in Computer Architecture, Electronic Design Automation and Machine Learning, as well as computer architects and compiler developers.