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	Sommario/riassunto	This volume presents the set of papers accompanying some of the lectures of the 10th International School on Formal Methods for the Design of Computer, Communication and Software Systems (SFM). Thisseriesofschoolsaddressestheuseofformalmethodsincomputerscience as a prominent approachto the rigorousdesign of the above-mentionedsystems. The main aim of the SFM series is to o'er a good spectrum of current research in foundations as well as applications of formal methods, which can be of help for graduate students and young researchers who intend to approach the ?eld. SFM 2010 was devoted to formal methods for quantitative aspects of p-gramminglanguagesandcoveredseveraltopicsincludingprobabilisticandti

med models, model checking, static analysis, quantum computing, real-time and -bedded systems, and security. This volume comprises four articles. The paper by Di Pierro, Hankin, and Wiklicky investigates the relation between the operational semantics of pro- bilistic programming languages and discrete-time Markov chains and presents a framework for probabilistic program analysis inspired by classical abstract interpretation. Broadbent, Fitzsimons, and Kashe? review the mathematical model underlying measurement-based quantum computation, a novel approach to quantum computation where measurement is the main driving force of c- putation instead of the unitary operations of the more traditional quantum c- cuit model. The paper by Malacaria and Heusser illustrates the informati- theoretical basis of quantitative information ?ow by showing the relationship betweenlattices,partitions,andinformation-theoreticalconcepts, aswellastheir applicabilitytoquantifyleakageofcon'dentialinformationinprograms. Finally, Wolter and Reinecke discuss the trade-o? between performance and security by formulating metrics that explicitly express the trade-o? and by showing how to ?nd system parameters that optimize those metrics.