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Titolo	Farming, fishing, forestry and hunting in a era of changing climate : hearing before the Subcommittee on Green Jobs and the New Economy of the Committee on Environment and Public Works, United States Senate, One Hundred Thirteenth Congress, second session, June 3, 2014
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Soggetti	Crops and climate - United States Fishery resources - Climatic factors - United States Animal populations - Climatic factors - United States Forests and forestry - Climatic factors - United States Climatic changes - Economic aspects - United States Climatic changes - Government policy - United States Animal populations - Climatic factors Climatic changes - Economic aspects Climatic changes - Government policy Crops and climate Fishery resources - Climatic factors Forests and forestry - Climatic factors Legislative hearings. United States
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2. Record Nr.	UNINA9910827701603321
Autore	Arpaia P (Pasquale)
Titolo	Flexible test automation : a software framework for easily developing measurement applications / / Pasquale Arpaia, Ernesto De Matteis, and Vitaliano Inglesi
Pubbl/distr/stampa	New York : , : Momentum Press, , [2015] ©2015
ISBN	1-60650-385-5
Descrizione fisica	1 online resource (326 p.)
Collana	Industrial, systems, and innovation engineering collection
Disciplina	602.87
Soggetti	Testing laboratories - Automation Physical measurements - Automation Magnetic measurements - Automation
Lingua di pubblicazione	Inglese
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Nota di contenuto	Part I. Background -- 1. Software for measurement applications -- 1.1 Overview -- 1.2 Basics -- 1.3 Main market solutions -- 1.4 Research: state of the art -- References -- 2. Software frameworks for measurement applications -- 2.1 Overview -- 2.2 General concepts -- 2.3 Why a framework for measurements? -- 2.4 Domain specific languages -- 2.5 Requirements of a framework for measurement applications -- References -- 3. Object- and aspect-oriented programming for measurement applications -- 3.1 Overview -- 3.2 Object-oriented programming -- 3.3 Aspect-oriented programming -- References -- Part II. Methodology -- 4. A flexible software framework for measurement applications -- 4.1 Overview -- 4.2 Framework paradigm -- 4.3 Fault detector -- 4.4 Synchronizer -- 4.5 Measurement-domain specific language -- 4.6 Advanced generator of user interfaces -- References -- 5. Quality assessment of measurement software -- 5.1 Overview -- 5.2 Software quality -- 5.3 The standard ISO 9126 -- 5.4 Quality pyramid -- 5.5 Measuring flexibility -- References -- Part III. Case study -- 6. The flexible framework for magnetic measurements at CERN -- 6.1 Overview -- 6.2 Methods for magnetic

field measurements -- 6.3 Automatic systems for magnetic measurements -- 6.4 Software for magnetic measurements at CERN -- 6.5 Flexibility requirements for magnetic measurement automation -- 6.6 The framework FFMM -- References -- 7. Implementation -- 7.1 Overview -- 7.2 Base service layer -- 7.3 Core service layer -- 7.4 Measurement service layer -- 7.5 User service layer -- 7.6 Software quality assessment -- References -- 8. Framework component validation -- 8.1 Overview -- 8.2 Fault detector -- 8.3 Synchronizer -- 8.4 Domain specific language -- 8.5 Advanced user interfaces generator -- References -- 9. Framework validation on LHC-related applications -- 9.1 Overview -- 9.2 On-field functional tests -- 9.3 Flexibility experimental tests -- 9.4 Discussion -- References -- Index.

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## Sommario/riassunto

In laboratory management of an industrial test division, a test laboratory, or a research center, one of the main activities is producing suitable software for automatic benches by satisfying a given set of requirements. This activity is particularly costly and burdensome when test requirements are variable over time. If the batches of objects under test have small size and frequent occurrence, the activity of measurement automation becomes predominating with respect to the execution. In this book, the development of a software framework is shown to be as a useful solution to satisfy this exigency. The framework supports the user in producing measurement applications for a wide range of requirements with low effort and development time. Furthermore, the software quality, in terms of flexibility, usability, and maintainability, is maximized. After a background on software for measurement automation and the related programming techniques, the structure and the main components of a software framework for measurement applications are illustrated. Their design and implementation are highlighted by referring to a practical application: the Flexible Framework for Magnetic Measurements (FFMM) at the European Organization for Nuclear Research (CERN). Finally, an experimental approach to the software flexibility assessment of measurement frameworks is presented by highlighting its application to FFMM.

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