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| 1. | Record Nr. | UNINA9910456701103321 |
| | Titolo | Advanced mathematical & computational tools in metrology & testing VIII [[electronic resource] /] / editors, F. Pavese ... [et al.] |
| | Pubbl/distr/stampa | Singapore ; ; Hackensack, NJ, : World Scientific, c2009 |
| | ISBN | 1-282-44272-4 |
| | | 9786612442728 |
| | | 981-283-952-6 |
| | Descrizione fisica | 1 online resource (419 p.) |
| | Collana | Series on advances in mathematics for applied sciences ; ; v. 78 |
| | Altri autori (Persone) | PaveseFranco |
| | Disciplina | 530.8 |
| | Soggetti | Measurement |
| | | Physical measurements |
| | | Metrology |
| | | Electronic books. |
| | Lingua di pubblicazione | Inglese |
| | Formato | Materiale a stampa |
| | Livello bibliografico | Monografia |
| | Note generali | Description based upon print version of record. |
| | Nota di bibliografia | Includes bibliographical references and index. |
| | Nota di contenuto | Foreword; Contents; Sensitivity Analysis in Metrology: Study and Comparison on Different Indices for Measurement Uncertainty A Allard and N Fischer; 1. Introduction to Sensitivity Analysis; 2. Sensitivity Analysis Indices; 2.1. Partial Derivative Approach - GUM; 2.2. "One At a Time" Index - GUM S1; 2.3. Rank Correlation; 2.4. Variance Based Method - Sobol Indices; 2.4.1. Definitions; 2.4.2. Estimation; 3. Examples; 3.1. Mass Calibration; 3.2. Ishigami Function; 4. Conclusion; Acknowledgments; References |
| | | Likelihood Maximization Against the Probability Density Function Shape S Aranda, J-M Linares and J-M Sprauel1. Introduction; 2. Statistical Best-Fit Approach; 3. Definition of Probability Density Function (PDF); 4. Definition of the Likelihood Criterion Function; 5. Conclusion; References; Methods for Estimation of the Effect of Correlation at the Measurement of Alternating Voltage T Barashkova; 1. The Research on the Effect of Correlation in the Measurement of Alternating Voltage; 2. Expert Statistical Method; Acknowledgments; References |
| | | Multi-Determination of Aerodynamic Loads Using Calibration Curve with a Polynomial and MLP Neural Network Combination I M Barbosa, O |

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Uncertainty Analysis in Calibration of Standard Volume Measures E Batista, N Almeida and E Filipe1. Introduction; 2. Uncertainty Evaluation; 2.1. The Measurement Model and Uncertainty Components; 2.2. Combined and Expanded Uncertainty; 3. Experimental Results; 4. Concluding Remarks; References; Virtual Atomic Force Microscope as a Tool for Nanometrology V S Bormashov, A S Baturin, A V Zablotskiy, R V Goldshtein and K B Ustinov; 1. Introduction; 2. "Virtual AFM" Features; 2.1. Scanning system; 2.2. Feedback system; 2.3. Optical registration system; 2.4. Probe-specimen interaction module
3. ConclusionAcknowledgments; References; Development of a Mathematical Procedure for Modelling and Inspecting Complex Surfaces for Measurement Process S Boukebbab, H Bouchenitfa and J-M Linares; 1. Introduction; 2. Presentation of the Mathematical Procedure; 3. Application for Rapid Prototyping Technology; 4. Conclusion; References; A Software Simulation Tool to Evaluate the Uncertainties for a Lock-in Amplifier P Clarkson, T J Esward, P M Harris, K J Lines, F O Onakunle and I M Smith; 1. Introduction; 2. Principles Of The Lock-in Amplifier; 3. Monte Carlo Calculation
4. Simulation Software Tool

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| Sommario/riassunto | The main theme of the AMCTM 2008 conference, reinforced by the establishment of IMEKO TC21, was to provide a central opportunity for the metrology and testing community worldwide to engage with applied mathematicians, statisticians and software engineers working in the relevant fields. This review volume consists of reviewed papers prepared on the basis of the oral and poster presentations of the Conference participants. It covers all the general matters of advanced statistical modeling (e.g. uncertainty evaluation, experimental design, optimization, data analysis and applications, multiple me |