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Soggetti	Computational intelligence Automatic control Robotics Automation Dynamics Nonlinear theories Computational Intelligence Control, Robotics, Automation Applied Dynamical Systems
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Nota di contenuto	Tasks of Information-Measuring Systems Functioning -- Quantitative Evaluations of Measurement Information -- Signals and Their Mathematical Models -- Transformation of Signals -- Statistical Processing of Measurement Data -- Statistical Evaluation Characteristics of Random Processes -- Transducers of Information-Measuring Systems -- Analog and Digital Interfaces -- Information Transfer in The Information Measuring Systems Channels -- Protection of Measurement Information from Unauthorized Access -- Metrological Provision of Information Measuring Systems.
Sommario/riassunto	This book concentrates on virtual IMS with the use of modern information and measurement modeling technologies. Modern IMS can be implemented as: real hardware and software measuring tools; virtual IMS with the use of modern information and measurement modeling

technologies, including simulation, mathematical, physical, with extensive use of computer equipment for conducting a simulation measurement experiment. Compared to real ones, virtual IMS has a number of advantages, and their implementation requires less time, production, and financial costs. However, in a number of cases, due to the information uncertainty of the object of measurement, such IMS cannot provide objective and reliable results, and therefore, it is necessary to conduct a full-scale measurement experiment using real systems. The potential capabilities of modern systems at the stage of information development of society have increased significantly, which contributes both to the expansion of the subject areas of their application and their use to increase the efficiency of known and solve new scientific and applied measurement tasks. The authors are in solidarity with other colleagues—specialists in measurements—in the forecasts of the development of IMS. No improvements in measurement information technologies, including computer and intellectual ones, have not led, are not leading, and obviously cannot lead in future to the expansion of the nomenclature of measurements of quantities while there are no corresponding sensors that form primary information during their direct interaction with the research object. Further development of IMS and their use in various fields of science and technology, including quantum metrology and nanotechnology, will largely be determined by the development of new principles of operation and the creation of new types of sensors based on them.
