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Sensor Buses and Interfaces

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Research Articles

Authors are encouraged to submit article in MS Word (doc) and Acrobat (pdf) formats by e-mail: editor@sensorsportal.com
Please visit journal's webpage with preparation instructions: http://www.sensorsportal.com/HTML/DIGEST/Submition.htm

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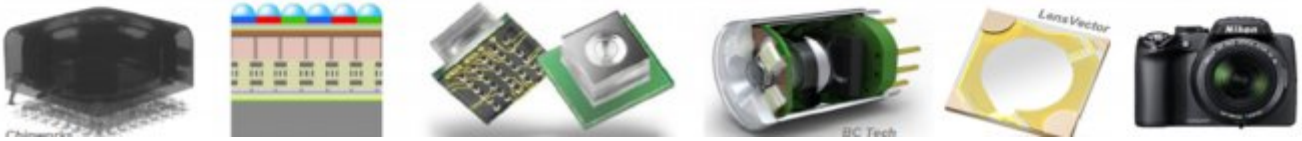

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Handbook of Laboratory Measurements and Instrumentation: Editorial Review

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Published by the International Frequency Sensor Association (IFSA) Publishing[1], *Handbook of Laboratory Measurements and Instrumentation* 234-page practical oriented book presents to readers experimental and laboratory activities with an approach as close as possible to reality, even offering remote access to experiments, providing to the reader an excellent guide and tool for learning laboratory techniques, instruments and methodologies including methods of measurements, results analysis and errors evaluation.

Authors – internationally recognized scientists from the University of Porto (Portugal) - Maria Teresa Restivo, Fernando Gomes de Almeida, Maria de Fátima Chouzal, Joaquim Gabriel Mendes and António Mendes Lopes have confirmed that instrumentation is vital for the design and implementation of measuring, monitoring and actuation systems and in data acquisition systems and processing, playing nowadays a fundamental role in many technological areas, as well as in those of certification, control and information. The increasing demand of experimental accuracy in all scientific areas makes instrumentation for measurement a crucial component, particularly in higher education curricula with a strong technological element, being also essential at research and development level.

The publication of this handbook on Laboratory Measurements and Instrumentation is well-timed because when dealing nowadays with large classes it is very difficult for universities' teachers and professors to provide to the students direct contact with well-structured hands-on experimental measurements in real measuring laboratory. This well organized book presents to higher education students in engineering, physics, bioengineering and other related areas, a first overview of some of the most common measurement techniques, offering a close approximation to the real laboratory environments, which they may encounter at a later stage in their studies.

The *Handbook of Laboratory Measurements and Instrumentation* is organized by the logic and methodical way. An introduction is following by thirteen well-illustrated chapters on various aspects of measurement and instrumentation such as generic laboratory equipment, temperature, dimensional, force, strain, displacement, proximity and angylar velocity measurements, data acquisition systems,

[1] International Frequency Sensor Association (IFSA) Publishing: http:// www.sensorsportal.com/HTML/IFSA_Publishing.htm

web monitoring and control, bridge circuits for resistance, inductance and capacitance measurements, etc.

Each chapters of this book are independent, self-contained and followed by useful references collected at the end of book including fundamental books, articles and carefully selected web links. Each one presents a clearly defined learning objective, the essential concepts and a step-by-step guide for performing the experimental activity, various complementary multimedia contents and a final synthesis. The set of open questions that closes each chapter is intended to provide formative assessment. This unique book includes dozens simulations, animations and videos (see examples in Figures 1-3). It makes this title very valued and different from existing books on measurements and instrumentation.

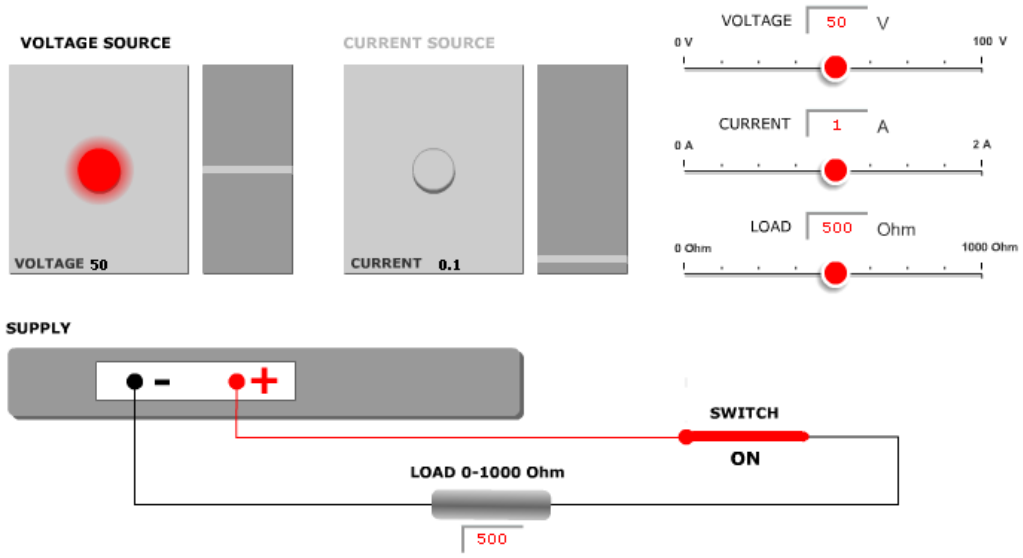

Fig. 1. Stabilized power supply simulator.

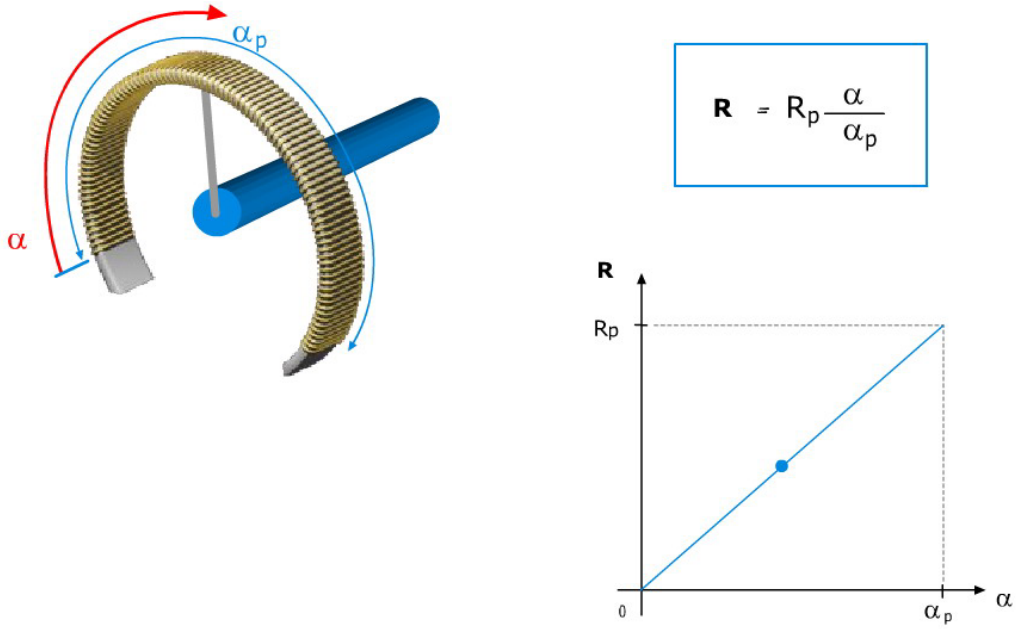

Fig. 2. Animation of resistance change due to sliding contact angular displacement.

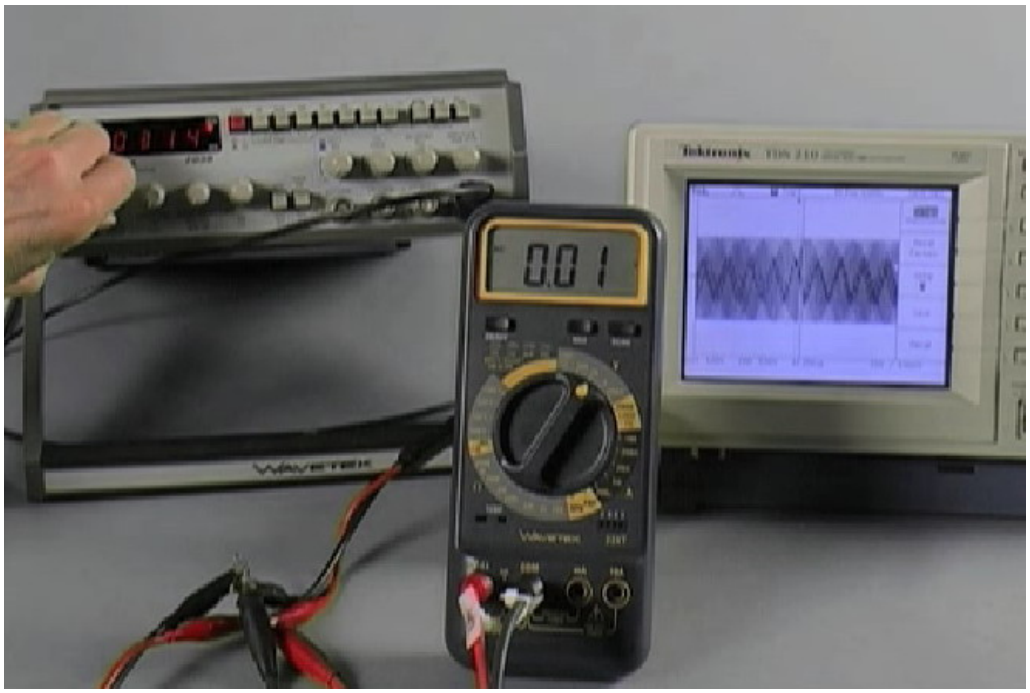

Fig. 2. Frequency response video.

The *Handbook of Laboratory Measurements and Instrumentation* not only fills the existing gaps in the available literature on measurements but also simultaneously opening the excellent prospects for the dissemination of know-how, technologies and techniques among students, researchers and engineers.

The new published book significantly contributes to the dissemination of experimental activity in engineering education and to facilitate the conception, tuning and exploration of experimental systems for laboratory training. The full technical description of the equipment is provided to make the setups easily reproducible. Engineers, researchers, technicians and students who are working in measuring laboratories will find plenty of practical information here for solving daily problems.

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Sensors & Transducers Journal

Guide for Contributors

Aims and Scope

Sensors & Transducers Journal (ISSN 1726-5479) provides an advanced forum for the science and technology of physical, chemical sensors and biosensors. It publishes state-of-the-art reviews, regular research and application specific papers, short notes, letters to Editor and sensors related books reviews as well as academic, practical and commercial information of interest to its readership. Because of it is a peer reviewed international journal, papers rapidly published in *Sensors & Transducers Journal* will receive a very high publicity. The journal is published monthly as twelve issues per year by International Frequency Sensor Association (IFSA). In additional, some special sponsored and conference issues published annually. *Sensors & Transducers Journal* is indexed and abstracted very quickly by Chemical Abstracts, IndexCopernicus Journals Master List, Open J-Gate, Google Scholar, etc. Since 2011 the journal is covered and indexed (including a Scopus, Embase, Engineering Village and Reaxys) in Elsevier products.

Topics Covered

Contributions are invited on all aspects of research, development and application of the science and technology of sensors, transducers and sensor instrumentations. Topics include, but are not restricted to:

- Physical, chemical and biosensors;
- Digital, frequency, period, duty-cycle, time interval, PWM, pulse number output sensors and transducers;
- Theory, principles, effects, design, standardization and modeling;
- Smart sensors and systems;
- Sensor instrumentation;
- Virtual instruments;
- Sensors interfaces, buses and networks;
- Signal processing;
- Frequency (period, duty-cycle)-to-digital converters, ADC;
- Technologies and materials;
- Nanosensors;
- Microsystems;
- Applications.

Submission of papers

Articles should be written in English. Authors are invited to submit by e-mail editor@sensorsportal.com 8-14 pages article (including abstract, illustrations (color or grayscale), photos and references) in both: MS Word (doc) and Acrobat (pdf) formats. Detailed preparation instructions, paper example and template of manuscript are available from the journal's webpage: http://www.sensorsportal.com/HTML/DIGEST/Submition.htm Authors must follow the instructions strictly when submitting their manuscripts.

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