



Editorial to the last papers from the IMEKO World Congress 2015, Prague

Paolo Carbone

University of Perugia, Italy

Section: EDITORIAL

Citation: Paolo Carbone, Editorial to the last papers from the IMEKO World Congress 2015, Prague, Acta IMEKO, vol. 6, no. 4, article 10, December 2017, identifier: IMEKO-ACTA-06 (2017)-04-10

Section Editor: Paul Regtien, Measurement Science Consultancy, The Netherlands

Received December 12, 2017; **In final form** December 12, 2017; **Published** December 2017

Copyright: © 2017 IMEKO. This is an open-access article distributed under the terms of the Creative Commons Attribution 3.0 License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

Corresponding author: Paolo Carbone, email: paolo.carbone@unipg.it

Dear Reader,
nine additional papers close this issue of Acta IMEKO.

The first paper by Miha Hiti addresses the problem of calibrating the train gauge bridge amplifier when measuring force, torque and pressure. A detailed procedure is described that provides a reduced calibration uncertainty with respect to the conventional single-point calibration. Experimental results are presented to support the idea described in the paper.

The paper by Christiaan S. Veldman describes a calibration problem to be applied to an accelerometer used in laser interferometry. The technique analyzed by the author allows extension of the calibration frequency range from 10 to 20 kHz. Performances are evaluated using experimental data.

Tomasz Tarasiuk describes a procedure to perform voltage dip tracking in the third paper of this series. The method provides its usefulness in the context of power quality. The paper also considers the impact of practical requirements, such as simplicity and ease in the implementation of the already available and newly proposed techniques.

The paper authored by Sebastian Baumgarten, Dirk Röske and Rolf Kumme describes how to compile the measurement uncertainty budget of a multi-component measuring facility, when it is applied to the measurements of more than one force or torque component in vectorial physical quantities. A thorough analysis is presented, based on the research experience of the authors working at PTB, in Germany.

The paper by Christian Müller-Schöll covers the calibration of weight pieces. It provides a detailed procedure to evaluate the mass comparator sensitivity and to assess the related

component uncertainty. Numerical examples and experimental results are described that highlight how to interpret the information provided by the makers of the used equipment.

The paper by M. Becchetti, R. Marsili, F. Cannella and A. Garinei deals with measurements of the gripping force associated with human fingers. An optical measurement system is described that is capable to relate contact pressure with changes in the grey-level of taken images.

The following paper is authored by Kamol Wasapinyokul, Santhad Chuwongin, Ajchara Charoensook. When making flux measurements, baffle reflection and shadows in an integrating sphere may result in inaccuracies in the uniformity of the generated illuminance of the light. A thorough analysis is made and experimental results described so that these non ideal phenomena results in predictable behaviours.

The paper by Loredana Cristaldi, Mohamed Khalil and Payam Soulatiantork deals with the reliability and root cause analysis of photovoltaic systems and balance of system subsystems. Several techniques are applied (RPN, FMECA, Markov) to predict and analyse the reliability properties of these entities.

The paper closing this issue is written by Loredana Cristaldi, Mohamed Khalil and Marco Faifer. It uses Markov processes to model the reliability of photovoltaic modules, and reports expressions of corresponding mean-time-to-failure, probability density functions, hazard and survival functions.

Have a fruitful reading of the last and fourth issue of ACTA IMEKO in 2017!

Paolo Carbone, Editor-in-Chief of Acta IMEKO.