

A banner for the 2019 NCSL International Workshop & Symposium. The left side features the text "METROLOGY in MOTION" in large, stylized white letters against a blue background with various scientific and industrial icons. The right side contains event details in white text: "2019 NCSL INTERNATIONAL WORKSHOP & SYMPOSIUM", "August 24–29, 2019", "Huntington Convention Center, Cleveland, OH", "Call for Papers", "Abstract Deadline March 31, 2019", and "Manuscript Deadline May 20, 2019". A small NCSL International logo is in the bottom right corner.

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August 24–29, 2019
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NCSL INTERNATIONAL
Serving the World of Measurement

Course Catalog Number: Tma-2
Course Track: Mass Measurements
Course Topic: Mass
Course Career Level: Intermediate

Monday, August 26 | 8:00 AM - 12:00 PM | 1/2-Day AM (4 Hours)

Course Title: Your Weigh to Best Weighing Practices

Instructor: Tony Kowalski, Sartorius Lab Instruments GmbH & Co. Kg

Abstract: Balance calibration should also include consideration and an estimation of measurement uncertainty. In addition, one will become aware that balance measurement uncertainty is not attributed to the balance but is instead belonging to the weighing process. Approximately 95 % of analytical balance weighing inaccuracies occur outside of the balance and are attributed to a variety of influences within the control of the user. This course is designed to make the user aware of how measurement uncertainty occurs and influences measurement across the weighing range of an electronic balance. Material covered includes how to check the calibration of your balances correctly, assess and assign a weighing tolerance and establish the smallest sample size appropriate to each balance having least effect on the intended accuracy of weighing.

Additionally, there will be practical examples of efficient use of integrated software and processes to assist in the tasks encountered in lab weighing today. Micropipettes and dispensers are widely used in laboratories and as “Test and Measuring” devices also require in-use calibration checks. Hardware and software solutions for in-house pipette calibration will also be covered with practical demonstrations.

Learning Objectives:

1. Identifying and elimination of weighing errors.
2. Understanding and estimation of Uncertainty.
3. Improve efficiency in lab weighing tasks using integrated software solutions, with a special focus on calibration of micro-pipettes.

Instructor Curriculum Vitae (CV):

Tony Kowalski has been employed by Sartorius for 34 years; originally at their United Kingdom Sales Office as Product Specialist Lab Weighing and Mass Metrology, then as Product Manager Lab Weighing & Mass Metrology and finally as Technical Manager Lab & Industry Process Control Systems. Since 2004 Tony has been employed by Sartorius HQ in Göttingen, Germany and is today responsible globally for Mass Metrology and Specialist Pipette Calibration solutions.