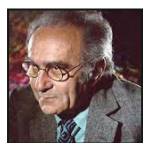




METROLOGY IN THE "GO/NO GO"- ZONE

WHEN CONFIDENCE IN YOUR MEASUREMENT RESULT MAKES ALL THE DIFFERENCE

*Knowledge is an unending adventure
at the edge of uncertainty*
- Jacob Bronowski

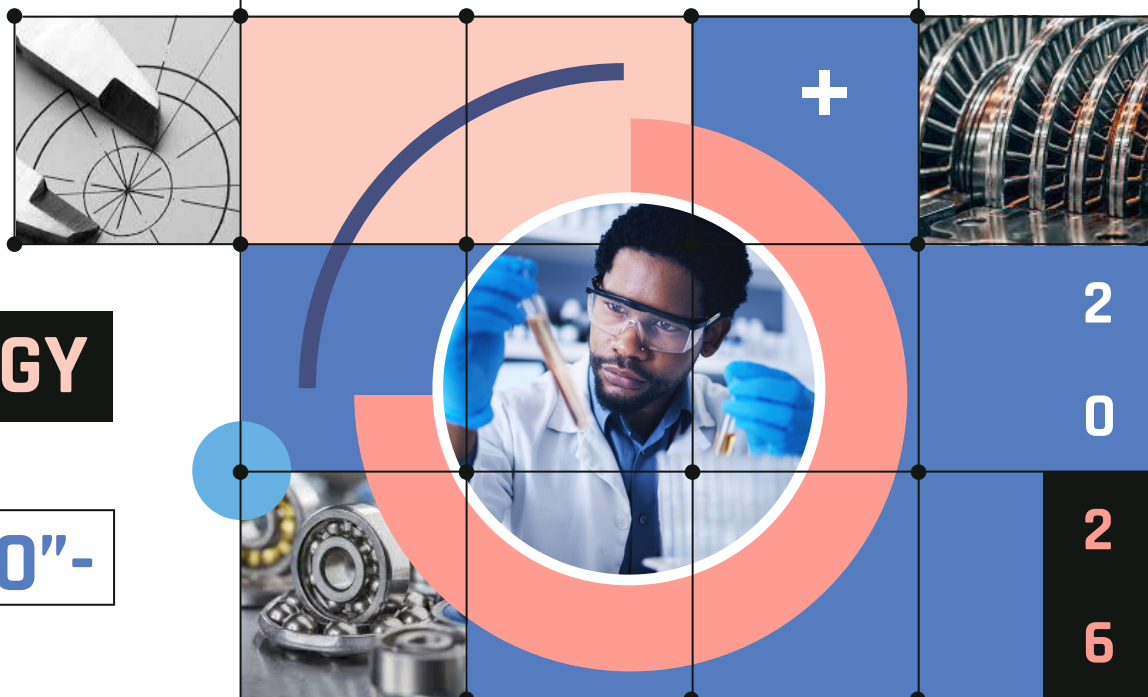


It is not only this Polish-British mathematician and philosopher who was the writer and presenter of the BBC television documentary series "The Ascent of Man" who made profound statements about uncertainty. There is also Albert Einstein who said, "As far as the laws of mathematics refer to reality, they are not certain; and as far as they are certain, they do not refer to reality" and Richard Feynman said "I can live with doubt and uncertainty and not knowing. I think it is much more interesting to live not knowing than to have answers that might be wrong." Even the actor Charlie Sheen very succinctly stated "Uncertainty is a sign of humility and humility is just the ability or willingness to learn."

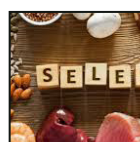
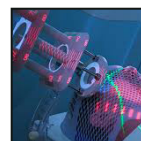


Metrology is essential for decision-making by providing the accurate, reliable data needed for informed choices in science, industry, and everyday life. It ensures quality control, allows for fair trade, and provides the foundation for innovation by enabling scientists, engineers, and managers to understand and trust the measurements and data they use for everything from product design to policy implementation.

Some examples of the critical use of measurement results in decision making include the geometric tolerances for flatness, perpendicularity, and position; and the specific ranges for hydraulic manifolds, such as $+0.0000/0.0005$ mm for certain components in aerospace engineering. These tolerances are critical for ensuring parts like turbine blades and landing gear are safe, reliable, and perform correctly, particularly in structural alignments and aerodynamic performance.



In radiation therapy, accurate dosing is crucial for maximising the chance of destroying cancer cells while minimising damage to surrounding healthy tissue. A slight deviation from the planned dose can have severe consequences, including reduced effectiveness against the tumour or dangerous side effects caused by overexposure. For some tumours, a small change in dosage can have a large effect on the outcome. For example, a 5% underdose could result in a 10% to 20% reduction in the probability of controlling the tumour. An underdose could leave "cold spots"—areas within the tumour that receive an inadequate dose—which allows cancer cells to survive and potentially cause the disease to return. Overdosing the chest area can cause long-term problems, including lung damage and heart problems. Misadministration of radiation to vital organs, such as the brain or spinal cord, can lead to devastating injuries, including stroke-like symptoms, hearing loss, or paralysis.



Selenium is essential for overall health because it is a critical trace element that supports several vital bodily functions, including proper thyroid function, immune system support, DNA synthesis, and reproduction. It also acts as a powerful antioxidant, protecting cells from damage caused by oxidative stress. The recommended daily nutritional level of selenium varies by age, with adults and children over 13 needing 55 microgram (μg). While selenium is essential, high doses can be toxic. It is important to stay within the recommended daily levels. Toxic levels of selenium can result from an intake exceeding 400 to 700 microgram (μg) per day, causing symptoms such as nausea, diarrhoea, hair loss, nail problems, and a distinctive garlic-like odour to the breath. Chronic or acute toxicity can also lead to more severe effects like dermatitis, fatigue, irritability, and peripheral neuropathy. Treatment involves immediately stopping the source of excessive intake and seeking medical advice, as there is no antidote.

7-9 SEPTEMBER 2026

LORD CHARLES HOTEL, SOMERSET WEST, CAPE TOWN



TEST & 2026 Measurement

INTERNATIONAL
CONFERENCE
& WORKSHOP

METROLOGY IN THE "GO/NO GO"-ZONE

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SCOPE OF SUBMISSIONS

For this year's event contributions are invited in the form of formal papers, posters and tutorials with a practical training focus under the following headings:

- **Measurement and testing in industry:** to highlight how your measurement results impact on decision-making in science and industry, to improve the state of our knowledge, support innovation and trade and protect the health of people and the environment.
- **Measurement traceability:** method validation, measurement uncertainty, reference materials
- **Laboratory quality systems:** ISO/IEC 17025, accreditation, calibration, proficiency testing
- **Laboratory staff:** recruitment, training, evaluating competence

The conference proceedings will be peer-reviewed by an editorial board and published on the NLA-website after the conference.

Manuscripts that are considered by the editorial board of the conference as worthy of publication will be recommended to the following peer-reviewed journals: Accreditation and Quality Assurance (ACQUAL), MEASURE (peer-reviewed journal of the NCSLI) and ARJ (African Research Journal).

REQUIREMENTS & GENERAL INFORMATION

Paper, tutorial, and discussion panel content should relate to the suggested topics and, wherever possible, to the conference theme. In all cases they must be non-commercial and objective. Abstracts of 350 words or less should be submitted electronically

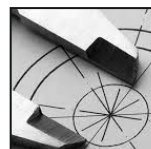
to the NLA-website at www.nla.org.za, with author contact information and a biography by **30 April 2026**. (See the NLA-website for both the abstract and manuscript format). When you submit your abstract, you must be sure that you receive confirmation of receipt of the abstract from the NLA database. The Chair of the Technical Program of the T&M2026 conference with the editorial board will select the top-rated abstracts for presentation at the conference. After notification of the abstract selection, authors will have until **31 July 2026** to submit the full manuscript. **ALL DEADLINES MUST BE MET.**

SUBMISSIONS

Authors' attention is drawn to the fact that the following registration categories apply for all paper, poster, or tutorial submissions.

A **SILVER REGISTRATION** will be awarded to authors whose abstracts are received on or before **30 April 2026**, and whose abstracts are accepted for presentation.

The **SILVER REGISTRATION** of presenters of papers will be converted to a **GOLD REGISTRATION** provided that the full manuscript of the paper is submitted by **31 July 2026**.



SILVER REGISTRATION: Discount of 25% on the conference fee, excluding accommodation.



GOLD REGISTRATION: Discount of 50% on the conference fee, excluding accommodation.

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