

GUEST EDITORIAL

YOU CANNOT CONTROL WHAT YOU CANNOT MEASURE

Measurement science and technology, remains at the centre of the study and development of the world around us for man's benefit. Lord Kelvin once said that: "When you can measure what you are speaking about and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind: it may be the beginnings of knowledge but you have scarcely in your thoughts advanced to the stage of Science." Such scientific measurement extends man's inbuilt senses, it enables us to operate our modern industry, safeguards our health and improves our quality of life. This is also a well-established knowledge field in engineering and specifically electrical engineering, with the IEEE Instrumentation and Measurement Society for example over 60 years old.

The development and characterisation of new measurement technology is as important as ever and South Africa should play a continuing role in this field if it is to remain relevant in the modern world. One forum where such work is discussed is at the Test and Measurement Conference, which was held in November 2010 in the central Drakensberg. This conference is organized by the National Laboratory Association. The work of the metrology, industrial test and measurement and academic measurement technology communities was showcased. The conference spans all measurement domains; that is chemical, electromagnetic

and mechanical. This special issue showcases some of the most exemplary papers from the conference, falling in the physical measurement domains. The highest quality conference contributions were panel-selected via the conference structures and invited to submit updated versions for the Africa Research Journal, where-after a normal peer review process was followed.

The next Test and Measurement conference takes place in 2012; please keep a lookout for the announcements. The National Metrology Institute of South Africa (NMISA), and the Department of Trade and Industry also sees it as important to support this forum. The NMISA is amongst other things responsible for maintaining the SI units and to maintain and develop primary scientific standards of physical quantities for South Africa and compare those standards with other national standards to ensure global measurement equivalence, and is therefore also involved in the R&D of advanced measurement methods and technology in this context.

We look forward to seeing more players involved in the next round, and hope that you enjoy the articles from last year's conference!

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