

From Monte Carlo Simulation to... "Las Vegas Recurrence"(An Overview of Measurement Uncertainty Assessment Techniques

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ABSTRACT

Reporting the measurement uncertainty was still 10 years ago the “privilege” of the national and primary metrology laboratories. Today more and more businesses, including service, testing, manufacture, etc., are required, in order to be accredited, to assess and report the uncertainty of their measurements. There are few questions arising when someone is undertaking the calculation the uncertainty of a measurement process in the new required format. How to start, what are the main sources off errors, what are the physical laws of variation, finding the right distribution, and more. The paper is providing an overview of the available sources of information, including software, in an attempt to solve some of these concerns. Attention and efforts are also directed to the identification of the common elements for possible standardization of the uncertainty assessment process.