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In metrology, measurement uncertainty is the expression of the statistical dispersion of the values attributed to a measured quantity. All measurements are subject to uncertainty and a measurement result is complete only when it is accompanied by a statement of the associated uncertainty, such as the standard deviation. By international agreement, this uncertainty has a probabilistic basis and reflects incomplete knowledge of the quantity value.
• In propagating uncorrelated errors from individual measurement to final result, use the square root of the sums of the squares of the errors – There are generally only a few main contributors (sometimes one) to the overall uncertainty which need to be addressed • Uncertainty analysis is a critical part of “real world” engineering projects
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