Uncertainty Assessment of High Frequent Laser Distance and Strain Measurements

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SUMMARY

High frequent laser measurements are commonly used in laser scanners or distributed fibre optic acoustic sensing (DAS) instruments. However, a reliable assessment of the attainable accuracy is still pending. This contribution discusses different approaches for the empirical quantification and modelling of the uncertainty using laser scanning data of mobile mapping systems (MMS) and DAS data from laboratory setups with dedicated testing devices.