

UNCERTAINTY ANALYSIS OF MICRO DIFFERENTIAL PRESSURE SENSOR USING INTERVAL ANALYSIS

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Abstract- A methodology for robust design analysis of micromechanical systems using interval methods is presented by considering piezo resistive micro differential pressure sensor with uncertainty in its parameters. The proposed method guides the design of micro sensor to achieve a robust and reliable design in a most efficient way. The uncertainty analysis is carried out numerically using Coventorware and analytically using Intlab.

Index terms: Uncertainty Analysis, Interval Analysis, Micro differential Pressure sensor, Uncertainty Analysis, Coventorware, Intlab