

Sensors for Flow Measurements based on MEMS Technology

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Abstract

This paper describes the work on flow sensors and pressure sensors for turbulence flow measurements performed by the MEMS-group at the department of Signals, Sensors and Systems at the Royal Institute of Technology. The sensors were manufactured using micromachining techniques in silicon. Two probe-like hot-wire configurations for turbulence flow measurements are described as well as two novel concepts for mechanical flow sensors based on flow induced force measurements. Finally a surfacemicromachined pressure sensor for turbulence flow measurements is described.