



Micromachined Flow Sensors

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Message from the Guest Editors

Dear Colleagues,

Since the publication of the first micromachined flow sensors in the 1970s, there has been a tremendous development. Whereas the first sensors were mostly based on thermal sensing principles, we now see a large range of different operating principles: Thermal, anemometric, calorimetric, time-of-flight, measuring pressure drop along a channel or over an orifice, measuring drag force at a channel wall or on an obstacle in the flow, and, more recently, also sensors based on Coriolis forces and ultrasonic measurements. Combining different sensor principles on a single chip allows the measurement of fluid parameters, such as density and viscosity. With increasingly smaller flow levels, the characterization and calibration of sensors also becomes a challenge.

This Special Issue covers the recent advances in all aspects of micro flow sensor research, including design and fabrication of the sensor chips, physical working principles, modeling and simulation, and the measurement setups for their characterization and calibration.





sensors



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Message from the Editor-in-Chief

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