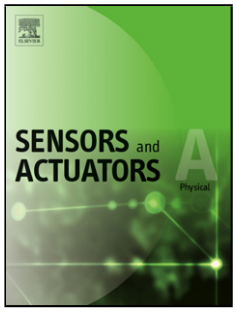

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A high-resolution dynamic fiber-optic inclinometer

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Highlights

- A high-resolution fiber-optic inclinometer is developed for dynamic measurement by using a fast demodulation algorithm.
- The tilt angle is retrieved from the direct current component of the measured real-time signals obtained by measuring the absolute Fabry-Perot cavity length real timely.
- The angle resolution of 0.03″ is achieved within the measurement range of ±1°.
- The tilt angle readouts are tolerant of ambient vibration.