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A capacitive MEMS device for monitoring flow and pressure associated with brain injuries[1] PHILIP BARTHOLOMEW, New Jersey Inst. of Tech. Masters Alumni, DAVID APIGO, THOMAS RUSSELL, ALOKIK KANWAL, REGINALD FARROW, GORDON THOMAS, New Jersey Institute of Technology
— The sensor measured a supine infant phantom with a ventricular-peritoneal shunt and controlled occlusions. Measurements showed the precision of the sensor to be 20 times better than required for observing the start of an occlusion before complete blockage. This suggests that the method is able to both detect and forecast blockages. For example, with gradual occlusion development over a year, the method forecasts a danger over one month ahead of blockage. The method also distinguishes between ventricular and peritoneal occlusions. Since the sensor provides quantitative data on the dynamics of the cerebrospinal fluid, it can also help test new therapies and work toward understanding hydrocephalus as well as other brain injuries.

[1]A new device for brain injuries

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