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Paper: Sensor system based on a Brillouin fiber laser for remote in series fiber Bragg gratings interrogation
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Abstract: A simple sensor system designed to monitor the temperature or strain of a certain number of critical points along a structure is presented and demonstrated. It is based on the remote interrogation of fiber Bragg gratings placed in series by means of a Brillouin fiber laser. Three FBGs were interrogated at 50 km away from the processing unit using 8 mW of Brillouin pump. Heterodyne detection brings forth a signal to noise ratio of approximately 40 dB in our measurements.Â