



# PHYSICS AND ASTRONOMY SEMINAR

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## **“Seismic Detection with $\pi$ -shifted Fibre Bragg Gratings”**

The basic operation principle and some metrics related to a  $\pi$ -shifted fibre-Bragg grating used as a strain sensor are investigated. The strain sensitivity, the frequency range of operation, the limit of absolute detection and the maximum rate of change of strain have been outlined for the bare sensor as well as two other tether lengths. The length of the longest passive tether link has been extended from 10 km to 50 km, and the sensor itself has been made polarization insensitive. A reliable lock has been achieved with this architecture, paving the way for remote detection of sound, temperature and pressure at a long distance from sources of electricity.

Monday, June 14, 2021

9:00 a.m.

**Zoom link:** <https://uvic.zoom.us/j/3451938356>