

# **MEMS based infrared sensors using porous silicon**

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**DATE:** Wednesday, June 20, 2018

**TIME:** 3:00 PM

**PLACE:** C2045

**ABSTRACT:** The talk will discuss the development of a MEMS based microspectrometer technology at the University of Western Australia. This technology has been demonstrated to span the short/mid/long wave infrared bands (1.5-12 microns). Our current achievements using thin films deposited on silicon will be presented along with our current efforts at micromachining porous silicon. The advantages of porous silicon films in regards to it's optical, electrical, mechanical and thermal properties will be considered, along with the difficulties in fabricating a technology from this material which consists mainly of air nanopores. Based on calculations and preliminary results, the opportunities to create higher sensitivity thermal detectors using a MEMS based porous silicon thermal bolometer will be discussed.

**ALL ARE WELCOME!**