

# SEMINAR NOTICE

*Department of Physics and Engineering Physics  
University of Saskatchewan*

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**SPEAKER:** Amir Qamar, PhD Candidate  
Physics & Engineering Physics

**TOPIC:** *Soft X-ray Spectroscopy to probe the electronic structure of PbO based films for direct conversion imaging devices*

**DATE:** January 15<sup>th</sup>, 2019

**TIME:** 3:30-4:30 p.m.

**PLACE:** Physics 103

## **ABSTRACT:**

There is growing research interest in the wide band gap photoconductors used as x-ray-to-charge transducers in direct conversion medical imaging detectors. Currently only amorphous selenium is being used at a large scale in direct conversion imaging devices. PbO based photodetectors can overcome several of the shortcomings of the selenium based photodetectors. We have investigated the electronic structure of several differently prepared PbO films deposited on ITO substrate. Soft x-ray spectroscopy is an invaluable tool to probe the valence electrons of any material. In this talk, I will discuss the fundamental aspects of x-ray spectroscopy, possible experimental challenges, and how we have applied these methods to probe the valence and conduction bands of PbO films.

*Coffee and Cookies will be served in Physics lounge at 3:00 p.m. for those attending the seminar.*