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 15th, 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.