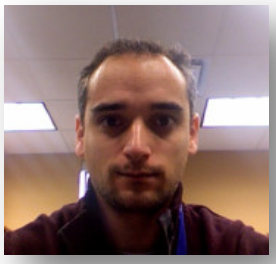
Lakehead UNIVERSITY 50 YEARS 1965 2015

# DEPARTMENT OF PHYSICS

**Invites you to attend a seminar by:**




## Dr. Aram Teymurazyan

Scientist, Thunder Bay Regional Research Institute

Assistant Professor of Physics

Fedoruk Centre Research Chair in Nuclear Imaging Technologies

University of Regina


## *"PET technology: Novel detectors for applications in human and plant imaging"*


Nuclear imaging is poised to revolutionize humankind's understanding of biological processes - extending the frontiers of knowledge in disciplines as diverse as plant science, veterinary medicine, pharmacology and drug development, oncology, and neurosciences. Positron Emission Tomography (PET), a particularly powerful nuclear imaging technique, is a dynamic and non-invasive window into the biological systems allowing for quantitative analysis of tissue metabolism and function. Imaging systems and technologies have greatly improved our ability to visualize biological tissues and processes. However, they are often coupled to general-purpose detectors that may limit their potential value for specific applications.

The goal of my work is to develop the next generation of customized detectors to refine existing imaging applications. My talk will focus on the novel PET technology that aims to improve the capabilities, efficiencies, and costs associated with medical imaging requirements of breast cancer diagnosis. Future plans for development of modular and flexible detector solutions for PET imaging driven by requirements of detection of radioisotope uptake in plants will also be briefly discussed.


**DATE:** **MONDAY, JUNE 29, 2015**

**TIME:** **1:00** PM

**Room:** **AT 5035** *Thunder Bay* / **OA 2005** *Orillia*