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SEMINAR SERIES
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Thursday, January 16th, 2020; 12 noon
Shuttleworth Auditorium
SJHC

Dr. Vladislav Toronov, PhD

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Title: Near-infrared Spectroscopy in Cardiac Arrest and Cardiac Surgery

Abstract: In recent years there is an exponentially increasing interest to the near-infrared spectroscopy (NIRS) as the tool of brain monitoring during cardiac arrest and surgery. This lecture provides introduction into the multispectral and hyperspectral NIRS of tissue with the focus on the metabolic and perfusion brain imaging. It also explains the basic physiology of the cardiac arrest and hypoxic ischemic brain injury and how NIRS can monitor the key physiological parameters of the brain. The analytical review of many recent studies is also provided in the clinical perspective.

Vlad Toronov received PhD in Physics from Saratov State University, Russia, in 1993. Was research scientist in Biomedical Physics in the University of Illinois at Urbana-Champaign (1997–2006). Currently Toronov is a faculty member in the Department of Physics, of Physics, Ryerson University, Toronto. Research interests include brain imaging and modelling, optical spectroscopy and imaging of tissue. Toronov is a member of iBEST Institute <https://www.ibestresearch.ca/>

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