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# Ottawa Section

## IEEE 125th EMBS Seminar Series

# Rubidium-82 PET: Bang-for-Buck Technology for Steering Cardiac Care


## Dr. Ran Klein

***Manager, Cardiac Imaging Core Laboratory, University of Ottawa Heart Institute***



Cardiac disease remains a leading cause of death in Western society, even though treatment has greatly improved in recent decades. The need for early diagnosis and tailored patient management still exists, while escalating health care costs are demanding cost effective diagnosis and treatment. Our work on quantification of cardiac blood flow using rubidium-82 ($^{82}$Rb) positron emission tomography (PET) is aimed at providing precise clinical information for effective patient management, while substantially reducing the cost of these exams. This talk will highlight the technologies we've been developing and exploiting to meet these goals. The following particulars will be discussed: advanced PET technologies, $^{82}$Rb/$^{82}$Sr generators and delivery of $^{82}$Rb to the patient, Quantification of myocardial blood flow from $^{82}$Rb PET images.


**Sept 15, 2011**

***admission is free***

**18:00 – 19:30 pm**

**ME-4342**

**Carleton University**

Ran Klein is manager of the Cardiac Imaging Core Lab at the University of Ottawa Heart Institute, National Cardiac PET Centre. His research is focused on extracting quantitative physiologic information from cardiac images. In particular Ran has worked on quantification of cardiac blood flow using rubidium-82 positron emission tomography (PET). His research has resulted in commercially available software for image analysis (FlowQuant). Ran's work on an automated rubidium-82 infusion system is currently being commercialized by DraxImage, Montreal. Ran obtained his PhD (2010) and MASc (2005) in Electrical Engineering from the University of Ottawa, and has been conducting research at the University of Ottawa Heart Institute since 2001. He is an adjunct professor at Carleton University.

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