

IEEE 125th Anniversary Celebration and IEEE London Section AGM

Keynote Address From Radio Astronomy to Image-guided Surgery

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Abstract

Forty years ago, Medical Imaging consisted of the recording of x-ray images on photographic film. Since then, this discipline has undergone an explosion that I have been fortunate to have witnessed, and been part of, during my career. Beginning with my serendipitous introduction to medical imaging as a graduate student in New Zealand, this talk traces the development of some of the major medical imaging modalities, such as CT, MRI and Ultrasound from their early beginnings to today, with illustrations from personal experiences along the way. It will also touch on some of the exciting developments in imaging that are paving the way for new interventional procedures.

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Dr. Terry Peters is a Scientist in the Imaging Research Laboratories at the Robarts Research Institute (RRI), London, ON, Canada, and Professor in the Departments of Medical Imaging and Medical Biophysics at the University of Western Ontario, as well as a member of the Graduate Programs in Neurosciences and Biomedical Engineering. He is also an adjunct Professor at McGill University in Montreal. Dr. Peters received his graduate training at the University of Canterbury in New Zealand in Electrical Engineering. For the past 30 years, his research has focused on the development of medical imaging techniques and the application of medical imaging in surgery and therapy.

Dr. Peters has authored over 200 peer-reviewed papers and book chapters, a similar number of abstracts, and has delivered over 180 invited presentations. For the past 8 years, he has been an Associate Editor of IEEE Transactions on Medical Imaging. Dr Peters is a Fellow of the Institute of Electrical and Electronics Engineers, the Canadian College of Physicists in Medicine; the American Association of Physicists in Medicine, the Australasian College of Physical Scientists and Engineers in Medicine, the Society for Medical Image Computing and Computer Assisted Intervention, and the Institute of Physics. He also serves on the executive board of the MICCAI society. Throughout his career, he has mentored over 75 Masters, Doctoral and Postdoctoral trainees.