

Carleton University med phys grad student publications and presentations 2022

Names of Carleton medical physics student authors of publications and presentations from MSc or PhD thesis work are in **bold**. In addition, author names are in ***bold italic*** for biomedical engineering MSc or PhD thesis work done as a graduate student in Physics.

Journal Publications (alphabetic by first author)

Eric Christiansen, Tong Xu, and Emily Heath. ALERT-RA: an aperture library-enabled real-time respiratory motion adaptive framework for 4D-VMAT. Med Phys. 2022; 1- 20.

<https://doi.org/10.1002/mp.15984>

Iymad R. Mansour and R. M. Thomson. Haralick texture feature analysis for characterization of specific energy and absorbed dose distributions across cellular to patient length scales. Physics in Medicine & Biology. 68(7), 2022.

<https://doi.org/10.1088/1361-6560/acb885>

Conference Proceedings and Presentations (presenting author underlined)

Council on Ionizing Radiation Measurements and Standards Annual Meeting: April 11-13, 2022, virtual meeting

Islam El Gamal,

A novel calorimeter design for synchrotron produced x-ray beams,
Poster, Junior Investigator symposium

Rodi Surensy,

Development of a hybrid alanine-calorimetry absorbed dose standard for linac electron beams,
Poster, Junior Investigator symposium

Monte Carlo Techniques in Medical Applications: April 11-13, 2022, Antwerp, Belgium

Elizabeth M. Fletcher, **Martin P. Martinov** and R. M. Thomson

Microdosimetry of gold nanoparticle enhanced radiation therapy using multiscale modelling.
Presentation

Iymad Mansour and R. M. Thomson,

Haralick analysis in microdosimetry: characterization of energy deposition in cellular targets,
Presentation

COMP Annual Scientific Meeting: June 23-25, 2022, Quebec City.

Meaghen Shiha, Joanne E Cygler, Robert MacRae and Emily Heath,
4D Monte Carlo dose reconstructions using surface motion measurements: a feasibility study,
Poster

Iymad Mansour, Luc Beaulieu, Eric Vigneault, Rowan Thomson,
A new approach for characterization of patient-specific 3D dosimetric data using Haralick
texture analysis
Poster

Elizabeth Fletcher, Martin Martinov and Rowan Thomson
Effects of cell and nucleus size on microdosimetry of gold nanoparticle enhanced radiation
therapy in a realistic tissue model
Poster

Michael Thibodeau, Michelle Hiltz, Deidre Batchelar, Juanita Crook and Rowan Thomson,
Radiobiological modeling of Pd-103 permanent breast seed implant brachytherapy using Monte
Carlo dose calculations
Presentation

Dinindu Gunasekara and Lindsay Beaton-Green
Modelling an Orthovoltage X-ray Machine with EGSnrc
Presentation

Islam El Gamal, Jean Dessureault and Malcolm McEwen
Absolute Dose Determination in Synchrotron Produced X-ray Beams: Commissioning of an
Aluminum Calorimeter,
Poster

Eva T.E. Anderson and Paul C. Johns,
Evaluation of miniature x-ray imaging detector and its application to focal spot assessment,
Poster

IEEE Nuclear Science Symposium, Medical Imaging Conference and Room Temperature Semiconductor Detector Conference: November 5-12, Milan, Italy

Taylor Clark, Rolf Clackdoyle, R. Glenn Wells

ECG-Gating to Aid Attenuation Map Alignment in Cardiac SPECT using Data Consistency Conditions,
Poster