

## APPENDIX XII.

### CONFERENCE & SEMINAR PRESENTATIONS

by members of the Medical Physics Unit: 2024 calendar year (x 50\*)  
(in multiple author entries, presenter is indicated by an asterisk \*)  
(the names of staff members of the MPU are underlined, students are indicated by †)

1. F. Mathew†, J. Kildea, *Single-cell whole-genome DNA sequencing to investigate radiation-induced carcinogenesis*, Winter Institute of Medical Physics, Breckenridge, Colorado, February 24-28, 2024. Poster presentation.
2. J. Yuan\*, M. Mahert†, A. Currell, J. Bancherit†, C. Lund†, A.G. Bui, J. Seuntjens, *Numerical and experimental tests of radial transmission lines for a proton therapy accelerator*, James Lepock Memorial Symposium, Toronto, Ontario, May 01, 2024. Poster presentation.
3. A. Esmaelbeigi†, J. Kalinowski†, N. Tomic, S. Devic, M. J. Rivard, T. Vuong, S.A. Enger, *Development of a new software package for dosimetry of the Xofig brachytherapy source*, Radioth. Oncol. **194**, S339-S341; ESTRO, Glasgow, UK, May 03-07, 2024. #998.
4. N. Tomic, H. Bekerat, S. Devic, *Dose response and energy dependence of the new EBT4 GafChromic film model*, Radioth. Oncol. **194**, pp S3210-S3212; ESTRO, Glasgow, UK, May 03-07, 2024. #704.
5. F. Mathew†, J. Kildea, *Single-cell whole-genome DNA sequencing to investigate radiation-induced carcinogenesis*, 3rd Annual Celebration of Research and Training in Oncology (CORTO), Montreal, QC, May 14, 2024. Poster presentation.
6. M. Robitaille†, F. Svahn, M. Morcos, J. Tsui, M. Lecavalier-Barsoum, S.A. Enger, *Patient-specific Modular Dynamic Shield for Intensity-modulated Brachytherapy in Vaginal Cancer Treatment*, 3rd Annual Celebration of Research and Training in Oncology (CORTO), Montreal, QC, May 14, 2024. Poster presentation.
7. J. Kalinowski†, P.G.F. Watson, J. Li, S.A. Enger, *Evaluation of deformable 3D printed materials for the development of an anatomical rectal intensity modulated brachytherapy quality assurance phantom*, 3rd Annual Celebration of Research and Training in Oncology (CORTO), Montreal, QC, May 14, 2024. Poster presentation.
8. G. Henique, C. Bang, D. Markel, W. Le, E. Fillion, P.F. Nguyen-Tan, H. Bahig, S. Kadoury, *Dose Aware Toxicity Prediction in Head and Neck Cancer Patients Using a Deformable 3D CNN on Daily CBCT Acquisitions*, Institute of Electrical and Electronics Engineers (IEEE) International Symposium on Biomedical Imaging, May 27-30, 2024, Athens, Greece.
9. D.S. Ayala Alvarez†, P.G.F. Watson, M. Popovic, V.J. Heng†, M.D.C. Evans, V. Panet-Raymond, J. Seuntjens, *Dosimetric evaluation of TG-43 formalism in intraoperative radiotherapy of glioblastoma*, 70<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists (COMP), Regina, Saskatchewan, June 05-08, 2024.
10. F. Mathew†, J. Kildea, *RadiSeq: A simulator for whole-genome DNA sequencing of radiation-exposed cells*, J.R. Cunningham Young Investigators Symposium, 70<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists (COMP), Regina, Saskatchewan, June 05-08, 2024. Oral presentation.
11. M. Mahert\*, C. Lund†, J. Bancherit†, J. Yuan, A. Currell, D.G. Cooke, J. Seuntjens, *Characterization of discretely excited radial parallel plate transmission lines for use in a dielectric wall accelerator*, 70<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists (COMP), Regina, Saskatchewan, June 05-08, 2024. Oral presentation.
12. M. Mahert†, H. Young - Moderators, A. McNiven, K. Surry, Y. Lee-Bartlet – Speakers, S. Aubert, C. Ferworn, M. Mahert†, H. Young – Submission, *Shattering Glass Ceilings: Navigating Leadership as a Woman in Medical Physics*, 70<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists (COMP), Regina, Saskatchewan, June 05-08, 2024. [Continuing Education Session.]
13. K. O'Sullivan-Stebent†, J. Kildea, *Anonymization by defacing of head and neck cancer imaging datasets for radiotherapy*, 70<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists (COMP) – "Bias in AI Workshop", Regina, Saskatchewan, June 05-08, 2024. Oral presentation.

14. J. Campos-Pazmino<sup>†\*</sup>, R-C. Bidert<sup>†</sup>, C. Ciobanu<sup>†</sup>, V. Fortier, E. McNabb, I.R. Levesque, *Toward Magnetic Resonance oximetry: Development of multi-parametric mapping in fat-water mixtures*, 70<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists (COMP) – “Bias in AI Workshop”, Regina, Saskatchewan, June 05-08, 2024. Oral presentation – Imaging session.
15. J. Faucher<sup>†</sup>, S. Ushio<sup>†</sup>, P. Pater, V. Fortier, E. McNabb, I.R. Levesque, *Using colour image segmentation with Magnetic Resonance images for computed tomography synthesis*, 70<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists (COMP) – “Bias in AI Workshop”, Regina, Saskatchewan, June 05-08, 2024. Oral presentation – Young Investigator Symposium.
16. I.R. Levesque, E. McNabb, V. Fortier, *The hierarchy of hazard controls in MR safety guidance*, 70<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists (COMP) – “Bias in AI Workshop”, Regina, Saskatchewan, June 05-08, 2024. Oral presentation – Quality & Safety session.
17. S. Ushio<sup>†</sup>, P. Pater, V. Fortier, J. Faucher<sup>†</sup>, I.R. Levesque, *Computed tomography synthesis in the presence of metal implants*, 70<sup>th</sup> Annual Scientific Meeting of Canadian Organization of Medical Physicists (COMP) – “Bias in AI Workshop”, Regina, Saskatchewan, June 05-08, 2024. Oral presentation – COMP Highlights session.
18. N. Tomic, H. Bekerat, S. Devic, *Comparison of energy dependence and dose response of the new EBT<sub>4</sub> with EBT<sub>3</sub> GafChromic film models*, International Conference on Radiation Applications (ICRA), June 10-12, 2024, Granada, Spain. P.15.
19. K. O’Sullivan-Stebent<sup>†</sup>, J. Kildea, *Protection de l’anonymat des patients par la défiguration des données d’imagerie de la tête et du cou*, Retraite annuelle du programme FONCER, Québec, Quebec, June 2024.
20. F. Mathew<sup>†</sup>, J. Kildea, *RadiSeq: A simulator for whole-genome DNA sequencing of radiation-exposed cells*, International Conference on the use of Computers in Radiation therapy (ICCR), Lyon, France, July 08-11, 2024. Poster presentation.
21. K. O’Sullivan-Steben et al, *A pipeline for generating longitudinal head and neck cancer radiotherapy datasets for machine learning*, International Conference on the use of Computers in Radiation therapy (ICCR), Lyon, France, July 08-11, 2024. Poster presentation.
22. M. Robitaille<sup>†</sup>, F. Svahn, M. Morcos, J. Tsui M. Lecavalier-Barsoum, S.A. Enger, *Dynamic Shields for Vaginal Intensity-modulated Brachytherapy*, World Congress of Brachytherapy, National Harbour, Maryland, July 10-13, 2024. Poster presentation.
23. J. Kalinowski<sup>†</sup>, P.G.F. Watson, J. Li, S.A. Enger, *Characterization of deformable 3D printed materials for the development of an anatomical rectal intensity modulated brachytherapy quality assurance phantom*, American Brachytherapy Society World Congress, National Harbour, Maryland, July 10-13, 2024. Poster presentation.
24. E.S. Poon, M. Popovic, T. Connell, P. Pater, *Development of an Integrated Platform Using Microsoft 365 for Machine Quality Control and Equipment Management in Radiotherapy*, 66<sup>th</sup> Annual Meeting & Exhibition of the American Association of Physicists in Medicine (AAPM), July 21-25, 2024, Los Angeles, California.
25. M. Rahbaran<sup>†</sup>, B.A. Bergmark, K.J. Croce, J.M.G. Tsui, P.M. Devlin, S.A. Enger, *Evaluating the Dosimetric Impact of Guidewire Position during Intravascular Brachytherapy with Monte Carlo-Based Calculations on Optical Coherence Tomography Images*, 66<sup>th</sup> Annual Meeting & Exhibition of the American Association of Physicists in Medicine (AAPM), July 21-25, 2024, Los Angeles, California.
26. M. Maher<sup>†\*</sup>, J. Yuan, C. Lund<sup>†</sup>, J. Bancheri<sup>†</sup>, D.G. Cooke, J. Seuntjens, *Discrete Excitation of Annular Parallel Plate Waveguides for Use in the Dielectric Wall Accelerator*, 66<sup>th</sup> Annual Meeting & Exhibition of the American Association of Physicists in Medicine (AAPM), July 21-25, 2024, Los Angeles, California. Poster presentation [Blue Ribbon Session].
27. C. Lund<sup>†\*</sup>, P.M. Jung, M. Mahert<sup>†</sup>, J. Bancheri<sup>†\*</sup>, T. Planche, R. Baartman, J. Seuntjens, *Beam preparation in a dielectric wall accelerator for proton therapy*, 66<sup>th</sup> Annual Meeting & Exhibition of the American Association of Physicists in Medicine (AAPM), July 21-25, 2024, Los Angeles, California. Poster presentation.
28. M. Robitaille<sup>†</sup>, F. Svahn, M. Morcos, J. Tsui, M. Lecavalier-Barsoum, S.A. Enger, *Patient-specific Modular Dynamic Shield for Intensity-modulated Brachytherapy in Vaginal Cancer Treatment*, 66<sup>th</sup> Annual Meeting & Exhibition of the American Association of Physicists in Medicine (AAPM), July 21-25, 2024, Los Angeles, California. Snap oral presentation.

29. P.G.F. Watson, S. Davis, W. Culberson, *Determination of intrabeam CQ values for a PTW 34013 ionization chamber calibrated in NIST reference beam qualities*, 66<sup>th</sup> Annual Meeting & Exhibition of the American Association of Physicists in Medicine (AAPM), July 21-25, 2024, Los Angeles, California. Poster presentation.
30. N. Panov†, J. Campos-Pazmino†, R-C. Bider†, I.R. Levesque, *Assessment of R2\* and fat-specific R1 precision and accuracy for MR oximetry with fat DESPOT*, Canadian Undergraduate Medical Physics Conference (CUMPC), online, August 22-23, 2024, Kelowna, British Columbia. Oral presentation.
31. A. Thibodeau-Antonacci†, M. Popovic, O Ates, C. Hua, J. Schneider, S. Skamene, C.R. Freeman, S.A. Enger, J. Tsui, *Trade-off of Different Auto-segmentation approaches in the Case of Pediatric Craniospinal Irradiation*, Annual Scientific Meeting of the Canadian Association of Radiation Oncology (CARO-ACRO), Vancouver, British Columbia, September 11-14, 2024. Virtual presentation.
32. N. Panov†\*, I.R. Levesque, *Assessment of R2\* and fat-specific R1 precision and accuracy for MR oximetry with Fat DESPOT*, MPU Friday Morning Talks Series, McGill University, Montreal, Quebec, September 20, 2024.
33. Z. Dai†\*, J. Kildea, *Quantifying radiation-induced DNA damage via track-structure simulations in a nuclear DNA model*, MPU Friday Morning Talks Series, McGill University, Montreal, Quebec, September 20, 2024.
34. M. Wang†\*, N. Ybarra, *Artificial intelligence-based cell survival colony counting*, MPU Friday Morning Talks Series, McGill University, Montreal, Quebec, September 27, 2024.
35. M-A. Leclerc†\*, *Ultrasound wrist mapping to develop a non-invasive radiation detector for dynamic positron emission tomography*, MPU Friday Morning Talks Series, McGill University, Montreal, Quebec, September 27, 2024.
36. S.O. Chavarria†\*, N. Ybarra, *Effects of radiation on the expression of cancer stem cell markers in non-small cell lung cancer cells*, MPU Friday Morning Talks Series, McGill University, Montreal, Quebec, October 04, 2024.
37. J. Bancheri†\*, J. Seuntjens, *PhD defence: Advances in ultra-high dose rate radiation therapy*, MPU Friday Morning Talks Series, McGill University, Montreal, Quebec, October 11, 2024.
38. K. O'Sullivan-Stebent†, J. Kildea, *Défiguration des données d'imagerie de la tête et du cou pour la radiothérapie*, Congrès de l'Association Québécoise des Physiciens Médicaux Clinique (AQPMC), Laval, Quebec, October 21-26, 2024. Virtual presentation.
39. A. Thibodeau-Antonacci†, M. Popovic, O Ates, C. Hua, J. Schneider, S. Skamene, C.R. Freeman, S.A. Enger, J. Tsui, *Trade-off of Different Auto-segmentation approaches in the Case of Pediatric Craniospinal Irradiation*, Congrès de l'Association Québécoise des Physiciens Médicaux Clinique (AQPMC), Laval, Quebec, October 21-26, 2024. Virtual presentation.
40. E. Wadge†\*, S.A. Enger, *Head and neck outcome prediction with transcriptomic data*, MPU Friday Morning Talks Series, McGill University, Montreal, Quebec, October 25, 2024.
41. A. Richer†\*, S.A. Enger, *Neutron-induced carcinogenic effects: Track-etch detector usage and modelling*, MPU Friday Morning Talks Series, McGill University, Montreal, Quebec, October 25, 2024.
42. J. La Macchia†\*, S.A. Enger, *Improving Yttrium-90 based hepatic radioembolization dosimetry: Quantifying the impact of motion experimentally*, MPU Friday Morning Talks Series, McGill University, Montreal, Quebec, November 01, 2024.
43. N. Desjardins-Proulx†\*, S.A. Enger, *Simulating direct and indirect neutron-induced DNA damage with repair mechanisms*, MPU Friday Morning Talks Series, McGill University, Montreal, Quebec, November 01, 2024.
44. S. Dev†\*, J. Kildea, *Assessing neutron-induced carcinogenesis risk in high-energy radiation therapy: A Monte Carlo and track structure study*, MPU Friday Morning Talks Series, McGill University, Montreal, Quebec, November 08, 2024.
45. T. Chernoff†\*, J. Kildea, *Identifying and predicting bone met lesion pain in radiographic images*, MPU Friday Morning Talks Series, McGill University, Montreal, Quebec, November 08, 2024.
46. T. Wang†\*, N. Ybarra, *Selective radiation-enhancing effects of a muscle-derived dipeptide in an orthotopic non-small cell lung cancer (NSCLC) xenograft mouse model*, MPU Friday Morning Talks Series, McGill University, Montreal, Quebec, November 15, 2024.
47. P. Bagherzadeh†\*, S.A. Enger, *Automatic referral of basal cell carcinoma patients: A natural language processing approach*, MPU Friday Morning Talks Series, McGill University, Montreal, Quebec, November 22, 2024.
48. M. Rahbaran†\*, S.A. Enger, *Dosimetry of alpha- and beta-emitting radionuclides for radiobiology and nuclear medicine applications*, MPU Friday Morning Talks Series, McGill University, Montreal, Quebec, November 29, 2024.

49. A. Esmaelbeigi<sup>†\*</sup>, S.A. Enger, *Dosimetric characterization of the Xofigo source in tandem with the novel rectal applicator*, MPU Friday Morning Talks Series, McGill University, Montreal, Quebec, December 06, 2024.
50. M. Dumancic<sup>†\*</sup>, S.A. Enger, *Microdosimetry studies for cancer cell irradiations with clinically relevant brachytherapy and external beam photon sources*, MPU Friday Morning Talks Series, McGill University, Montreal, Quebec, December 13, 2024.

(\* pending notification - additional conference presentations / 2024 calendar year)