CURRRCULUM VITAE

John Kildea, Ph.D., MCCPM

Personal Information

Place of Birth:	Drogheda, Ireland
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Please note: underlined text in this document is hyperlinked when viewed in PDF.

Education

- Clinical Residency:

  February 2010 to September 2012
  Department of Medical Physics, McGill University Health Centre
  Therapeutic Medical Physics
  Supervisor: Mr. William Parker

- M.Sc.:

  September 2008 to February 2010, degree granted June 2010
  Medical Radiation Physics, Medical Physics Unit, McGill University
  Thesis title: *An evaluation of NCRP report 151–radiation shielding design for radiotherapy facilities, and a feasibility study for 6 MV open-door treatments in an existing high-energy radiation therapy bunker*
  Supervisors: Prof. Ervin Podgorsak and Mr. Michael Evans

- Ph.D.:

  October 1998 to December 2002, degree granted April 2003
  High-energy Astrophysics, Dept. of Experimental Physics, University College Dublin
  Thesis title: *Studies of the Crab Nebula and Pulsar at TeV Energies*
  Supervisor: Prof. David Fegan

- B.Sc. (first-class honours):

  October 1994 to May 1998, degree granted July 1998
  Physics with Astrophysics, Queen's University Belfast
  One year (1996/1997) of my undergraduate was spent at Alaska Pacific University in Anchorage, AK on a scholarship from the Northern Ireland Business Education Initiative

Professional Certification

- July 2012 (renewed, November 2017):
  Membership, Canadian College of Physicists in Medicine

Professional, Academic and Research Positions

- January 2017 to present:
  Assistant Professor (tenure track), Gerald Bronfman Department of Oncology, McGill University
- June 2018 to present:
  Associate Member, Department of Biomedical Engineering, McGill University
- February 2016 to present:
  Associate Member, Department of Physics, McGill University
- July 2015 to present:
  Associate Member, Medical Physics Unit, McGill University
  Junior Scientist, Cancer Research Program, Research Institute of the McGill University Health Centre
- July 2015 to January 2017:
  Assistant Professor (clinical track), Department of Oncology, McGill University
- September 2010 to July 2015:
  Affiliate Member, Medical Physics Unit, McGill University
- December 2009 to present:
  Clinical Medical Physicist, Department of Medical Physics, McGill University Health Centre
- November 2006 to August 2008:
  Postdoctoral associate, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA
  Based at the Fred Lawrence Whipple Observatory, AZ
- January 2003 to November 2006:
  Postdoctoral associate, Department of Physics, McGill University

Research Impact

As of September, 2020, my research contributions (medical physics and astrophysics combined) have been cited in 5,155 articles. My Google Scholar citation statistics are:

	All	**Since 2015**
Citations	5,155	1,377
h-index	39	20
i10-index	55	34

Selected Impactful Publications

I list here four peer-reviewed papers of particular importance in my career to date. My full list of publications is provided at the end of this document.

- **J. Kildea**, J. Battista, B. Cabral, L. Hendren, D. Herrera, T. Hijal, and A. Joseph. *Design and development of a person-centered patient portal using participatory stakeholder co-design.* Journal of medical Internet research, 21(2):e11371, 2019.

  [My role: Primary author, project co-lead. Significance: This paper describes the process that I used to design, develop, and implement the Opal patient portal as co-lead of the Opal Health Informatics Group. It represented a major undertaking that has evolved into a multi-year, multi-million-dollar project to provide patients with access to their medical data in Quebec and collect patient-reported outcomes.]

- R. Maglieri, A. Licea, M. Evans, J. Seuntjens, and **J. Kildea**. *A nested neutron spectrometer to measure neutron spectra in radiotherapy.* Medical Physics, 42(11):6162-6169, 2015.

  [Manuscript selected for *Editor's Picks* in Medical Physics, November 2015. My role: senior authorship, idea, supervisory, data-taking, editorial. Significance: This paper was the first to describe the use of the Nested Neutron Spectrometer to measure neutron spectra in radiotherapy environments. It led to the creation of my research group on neutron-induced carcinogenic effects.]

- V. Acciari, E. Aliu, T. Arlen, T. Aune, M. Bautista, M. Beilicke, W. Benbow, D. Boltuch, S. Bradbury, J. Buckley, et al. *A connection between star formation activity and cosmic rays in the starburst galaxy M82.* Nature, 462(7274):770-772, 2009.

  [Alphabetical authorship; My role: member of the design and construction team for the experiment, data-taking, significant software contribution to the data acquisition system and for the data analysis—both softwares still in use. Significance: This paper was the first to link cosmic-ray acceleration to star formation activity in starbust galaxies and thereby advanced our understanding of the origin of cosmic rays.]

- **J. Kildea**, R. Atkins, H. Badran, G. Blaylock, I. Bond, S. Bradbury, J. Buckley, D. Carter-Lewis, O. Celik, Y. Chow, et al. *The Whipple Observatory 10 m gamma-ray telescope, 1997-2006.* Astroparticle Physics, 28(2):182–195, 2007.

  [First, then alphabetical authorship; My role: primary author. Significance: This publication describes the Whipple 10 m telescope during the period of my Ph.D. and first postdoc. For most of that time it was the most sensitive ground-based gamma-ray telescope in the world and it served as the prototype instrument for several major observatories that have since been built or are under construction.]

Honours, Awards, and Nominations

- Prix Banque Nationale – Innovation et soutien à la communauté 2020, Quebec Breast Cancer Foundation, with Dr. Tarek Hijal and Dr. Jamil Asselah for the Opal patient portal ($25,000)
- Trottier-Webster Award for Innovation 2019, RI-MUHC ($100,000) [one award out of 30 applications]
- Quebec eHealth solution of the year for 2019, Le Point TI Santé et services sociaux, with Dr. Tarek Hijal for the Opal patient portal

- Prix d'excellence 2019 – Coup de coeur des ministres, Quebec Ministry of Health and Social Services, with the Opal Health Informatics Group for the Opal patient portal ($10,000) [**highest accolade in the Quebec healthcare system**]
- Nomination for the 2019 CIHR Gold Leaf Award—Patient Engagement with Tarek Hijal and Laurie Hendren. Nominated by Dr. David Eidelman, Dean of Medicine, McGill University for the patient-centered research activities of the Opal Health Informatics Group
- Merck Patients First Award for Excellence and Innovation in Patient-Centred Care, for Opal—The Oncology Portal and Application with Tarek Hijal and Laurie Hendren, January 2018
- Institute for Patient and Family Centered Care, Honorable Mention Patient Partnership award for Opal—The Oncology Portal and Application with Tarek Hijal and Laurie Hendren, November 2017
- Prix de Cancérologie en Évolution de la pratique with Logan Montgomery, Carolyn Freeman, Tarek Hijal, Ciro Maietta and William Parker for the project "Intégration du Système national de déclaration des incidents—radiothérapie (SNDAIRT) dans le flux de travail clinique au CUSM". Awarded by La Direction générale de cancérologie du Québec, 2017.
- Prix de Cancérologie en Évolution de la pratique with Ackeem Joseph for the project "Depdocs—un système de collaboration pour les équipes de soins de santé". Awarded by La Direction générale de cancérologie du Québec, 2017.
- Early Career Researcher New PI Award: Awarded by the Canadian Institutes of Health Research-Institute of Cancer Research (CIHR-ICR), the Canadian Cancer Society (CCS), and the Ontario Institute for Cancer Research (OICR). Expenses covered to attend the 2017 Cancer Research Conference and Early Career Researcher Program, Vancouver, BC, November 2017.
- The Elaine T. and Charles H. Peters Award in Medical Oncology 2016 with Dr. Tarek Hijal and Prof. Laurie Hendren: Awarded by the McGill University Health Centre Research Institute for development of Opal, the Oncology Portal and Application. CAD $15,000
- Prix de Cancérologie en Organisation des services (for the Health Informatics Group, with Prof. Laurie Hendren and Dr. Tarek Hijal): Awarded by La Direction générale de cancérologie du Québec, 2016.
- Dobbin Scholarship (research visit to Trinity College Dublin), Ireland-Canada University Foundation, 2014. CAD $4,000.
- Basic Research Award, Awarded by Enterprise Ireland, 1998 to 2001. £2,000 per year.
- Visiting scholar: Awarded by the Smithsonian Astrophysical Observatory, Arizona, 1998 and 2001. USD $6,500 per three-month visit.
- Scholarship for one fully-funded year of study at a US University (Alaska Pacific University, Anchorage, AK): Awarded by the Northern Ireland Business Education Initiative, 1996/1997. Tuition fees, travel, accommodation, food and living expenses for one academic year.
- IAESTE research experience scholarship (University of Leipzig, Germany), May to August 1996. Awarded by the British Council. Travel and accommodation expenses.

Membership of Professional and/or Learned Societies

- American Society for Radiation Oncology, 2019-present
- Pediatric Radiation Oncology Society, 2017-present
- Canadian Radiation Protection Association, 2015-present
- Canadian College of Physicists in Medicine, 2012-present
- Canadian Organization of Medical Physicists, 2010-present
- Association québécoise des physicien(ne)s médicaux cliniques, 2008-present

Research Experience

Research Streams

My research may be divided into three streams or axes. These are:

1. Patient-Centered Health Informatics
2. Radiotherapy Informatics
3. Neutron-Induced Carcinogenesis Effects

Photos and links to specific research projects and presentations are available via my web page at: depdocs.com/jkildea/research.html. A list of publications is provided at the end of this document.

Reports of Invention

- *Opal - Back-end and middle-end software to automatically push personal health information and personalized information to a patient web portal and/or mobile phone application, to collect Patient-Reported Outcomes and to interface with a waiting room management system*, Kildea, Hijal, Hendren, Joseph, Herrera, submitted to McGill University Office of Innovation and Partnerships, December 2016 (reference number: 17098)
- *ORMS - Online Room Management Software for hospital waiting rooms*, Kildea and Hijal, submitted to McGill University Office of Innovation and Partnerships, March 2016 (reference number: 16117)

Grant Panel Membership

- Teleconference member, CIHR Project Grant review committee, 2019
- Expert reviewer, Ontario Research Fund, 2019
- Expert reviewer, BC Cancer CPAG, 2019
- Expert reviewer, Prostate Cancer UK Major Awards, 2019
- Teleconference member, CIHR Project Grant review committee, 2018
- Expert reviewer, Ontario Research Fund, 2017

- Observer (Early Career Investigator Observer program), CIHR Project Grant peer review panel (Cancer Biology & Therapeutics), November 2017
- Expert reviewer, Unity through Knowledge Fund of the Croatian Science Foundation, 2017
- Expert reviewer, CancerCareManitoba Foundation, 2017
- Peer-review panel member for NASA's Fermi space telescope Cycle-1 Guest Investigator Program, Washington DC, December 2007, 4 days

Research Ethics Training

I have successfully completed the following research ethics training modules:

- Tutorial in Research Ethics of the Quebec Ministry of Health and Social Services
  - Module 1: Basic research ethics training
  - Module 3.1: Ethical analysis of benefits and harms in research
  - Module 3.2: Issues Pertinent to Certain Types of Research Participants: Children, Incompetent Adults and Persons in Situations of Vulnerability
  - Module 3.3: Ethics and Regulation of Clinical trials

Research Grants Awarded

Note: In the following list the Principal Investigator is in bold.

- Oncopole Priorité Patient, **Kildea**, Hijal, Laizner, OncoBuddy and OncoConseil - A research project to integrate peer-to-peer support and peer advice into the Opal patient portal. [$200,000 2020-2022]
- Canada Foundation for Innovation (CFI) John R. Evans Leaders Fund, **Kildea**, Development of Strategies to Better Understand and Control the Long-term Side Effects of Radiotherapy. [$175,158, infrastructure grant, 2020-2024]
- CIHR COVID-19 Rapid Research Funding, **Pomey** et al., Evaluation en temps réel du déploiement de technologies connectées et du partenariat de soins et services dans le contexte de crise sanitaire lié à la COVID-19 - le programme Techno-COVID-Partenariat. [$502,487, 2020-2021]
- MI4 Emergency COVID-19 Research Funding, **Lebouché**, Kildea, Hijal, Asselah, Kronfli, Berkati, Use of OPAL-COVID, a mobile application, for real-time at home follow-up of people who test positive for COVID-19 at the Glen site: a feasibility study. [$100,000, 2020]
- Montreal Children's Hospital Foundation, **Kildea**, Hijal, Asselah, Development of the pediatric components of the Opal patient portal. [$1,500,000, operating grant, 2020-2021]
- McConnell Foundation, **McCusker**, Kildea, PARTAGE (pediatric component)—Patients and Researchers Team-up And Generate Evidence. [$300,000, operating grant, 2020-2022]
- Canadian Space Agency, **Kildea**, Ybarra, Ragoussis, A Cell-by-Cell Track Structure and Genomic Examination of the DNA Damage Caused by Low-and Light-LET Ionizing radiation. [$100,000, operating grant with student support, 2020-2022]

- MUHC Foundation Trottier-Webster Award for Innovation (grant), **Kildea**, Laizner, Hijal, Asselah, Empowered Patients, Informed Research—Blockchain data donation with the Opal Patient Portal. [$100,000, operating grant, 2020-2022]
- NSERC CREATE, **Després**, Archambault, Charest, Fortier, Kildea, Lahrichi, Laviolette, Légaré, Régis, Rousseau, Responsible Health and Healthcare Data Science. [$1,650,000, collaborative research and training with an emphasis on trainee mentoring, 2019-2024]
- Medteq - Fonds de soutien à l'innovation en santé et en services sociaux, **Kildea**, Hijal, Tayco, Gaudreault-Tremblay, Étendre à un milieu hospitalier pédiatrique l'utilisation d'une application portail patient de téléphonie mobile développée pour l'oncologie. [$299,825, research and development, 2019-2021]
- Rossy Cancer Network Research Fund grant, **Hendren**, Hijal, Kildea, Asselah, Faria, Lambert, Davidson, Tsui, Meti, Hart, Kiarash, Developing and Evaluating a Mobile Application for Caregivers, $100,000, 2018-2020. [My role: co-lead of the Opal team with Laurie Hendren and Tarek Hijal; development of the application and coordination of the research project.]
- Internal NSERC Research Tools and Instruments grant competition, McGill University, **Kildea**, Neutron-induced Carcinogenic Effects (NICE) [$33,194, hardware support, 2018]
- Canadian Partnership Against Cancer Grant, **Lambert**, Faria, Rosberger, McCusker, Kildea, Hendren, Hijal, Beauchamp, Ly, Hamel, e-IMPAQc: Implementation and evaluation of an e-Health application for the systematic assessment of patient and caregiver reported outcomes in Quebec across the cancer continuum. $300,000 per year ($1,500,000 total), 2018-2022. [My role: co-lead of the Opal team with Laurie Hendren and Tarek Hijal—patient-reported outcome collection tool for the e-IMPAQC project in six Quebec cancer centres]
- Rossy Cancer Network Quality Improvement Initiatives Grant, **Buckett**, Davison, Davidson, Herrero, Kavan, Kildea, Langleben, Towards a gold standard in fertility preservation care for female cancer patients. $40,000 for one year plus project management support. 2018-2019 [My role: development of education material dissementation software within the Opal patient portal]
- Montreal General Hospital Foundation research and development support, **Hendren, Hijal, Kildea**, Development of the Oncology Portal and Application. [$215,000, 2017-2018]
- Research Institute of the MUHC, **Kildea**, Startup grant, $65,000/yr, 2017-2020
- CNSC student support grant, **Kildea** and Seuntjens, Addressing the risk from secondary neutrons in radiotherapy. [$15,000, 2017-2018]
- Cedars Cancer Foundation research and development support, **Hendren, Hijal, Kildea**, Development of the Oncology Portal and Application. [$100,000, 2016-2017]
- Patients' Committee of the Cedars Cancer Centre development support, **Hendren, Hijal, Kildea**, Development of the Oncology Portal and Application. [$8,000, 2017-2018]
- Rossy Cancer Network Research Fund grant, **Kildea**, Souhami, Faria and Cury, Rectal toxicity prediction using accumulated-DVHs determined from daily CBCT imaging for hypofractionated radiotherapy of the prostate. [$41,700, 2016-2018]

- CNSC student support grant, **Kildea** and Seuntjens, Addressing the risk from secondary neutrons in radiotherapy. [$15,000, 2016-2017]
- Patients' Committee of the Cedars Cancer Centre development support, **Hendren, Hijal, Kildea**, Development of the Oncology Portal and Application. [$2,000, 2017-2018]
- Montreal General Hospital Foundation research and development support, **Kildea, Hijal**, Development of a waiting room management solution. [$78,000, 2016-2017]
- Natural Sciences and Engineering Research Council of Canada Discovery Grant, **Kildea**, Neutron-induced Carcinogenic Effects (NICE)—an examination of the biophysics underlying neutron carcinogenesis. [$125,000, 2016-2021]
- MUHC Patient Education Committee grant, **Kildea, Hendren and Hijal**, Provision of just-in-time patient education material via the Oncology Portal and Application. [$800, 2016]
- Collaborative research agreement with Canadian Nuclear Laboratories, **Kildea**, Seuntjens, Licea, Dubeau, Richardson, El-Jaby, Paterson, Addressing the risk from secondary neutrons in radiotherapy. [$10,000 per year in travel assistance, plus an in-kind commitment of access to resources and staff at CNL's Chalk River research reactor and biological research facility, 2015-2019]
- MUHC Challenge Q+ Award, **Hendren, Hijal and Kildea** (joint principal investigators), Realistic, knowledge-based waiting times in radiotherapy—Addressing the pain of waiting. [$150,000, 2015-2016]
- CNSC student support grant, **Kildea** and Seuntjens, Addressing the risk from secondary neutrons in radiotherapy. [$15,000, 2015]
- CPQR student support grant, **Kildea**, Validation of the National System for Incident Reporting—Radiation Treatment. [$19,750, 2015]
- CNSC student support grant, **Kildea** and Seuntjens, Photoneutron research in radiotherapy. [$15,000, 2014]
- CNSC student support grant, **Kildea** and Seuntjens, Photoneutron research in radiotherapy. [$12,000, 2013]
- Canadian Patient Safety Institute studentship, **Kildea** and Joseph, Automated Electronic Health Record Auditing. [$7,000, 2013]
- Rossy Cancer Network Quick Win Initiative. **Kildea and Benc** (co-leads), Improving educational material for radiotherapy patients. [$20,000, 2013]
- CNSC student support grant, **Evans**, Kildea and Seuntjens, Photoneutron research in radiotherapy. [$15,000, 2011]

Journal Editorial

- European Journal of Medical Physics (Physica Medica): Guest Editor for the ICCR-MCMA Focus Issue (2020)
- IEEE Transactions on Radiation and Plasma Medical Sciences: Associate Editor (2016-present)

Journal Article Peer Reviews

- 2020: Int. Journal of Radiation Oncology, Biology, Physics (1 manuscript), Radiotherapy and Oncology (1 manuscript), Development Engineering (1 manuscript)
- 2019: Radiation Physics and Chemistry (1 manuscript), Physics in Medicine and Biology (1 manuscript), International Journal of Medical Informatics (1 manuscript), Journal of Oncology Practice (1 manuscript)
- 2018: Journal of Oncology Practice (1 manuscript), Medical Physics (1 manuscript), Journal of Medical Systems (1 manuscript), Physics in Medicine and Biology (1 manuscript), Scientific Reports (1 manuscript)
- 2017: Physics in Medicine and Biology (2 manuscripts), Journal of Medical Internet Research (1 manuscript)

Teaching/Academic Experience

Course Instruction and Coordination

Within the Gerald Bronfman Department of Oncology at McGill, I designed and created the multidisciplinary Oncology Practicum class (ONCO 630, 3-credits) of the new Graduate Diploma in Oncology course. ONCO 630 will start in January 2020 and will provide students with real-world research or quality improvement project experience in an oncology-related domain. Students will be paired with clinical supervisors and will meet weekly in the classroom for journal clubs and project-related presentations.

Within the McGill Medical Physics Unit, I teach the following courses:

- MDPH 613—I am the course coordinator, designer and primary instructor for this Health Physics for Medical Physicists class (2 credits)

  I took over this class in 2010 from a number of instructors. I overhauled the curriculum, instituted active learning strategies such as quizzes and real-life scenarios, and a laboratory component. I also wrote a comprehensive set of notes that I plan to turn into a textbook. These are available on the class webpage (depdocs.com/jkildea/healthPhysics.html)

- MDPH 612—Instructor for 12 lectures of 1.5 hours each on "Instrumentation and Computation in Medical Physics" (3 credits)

  I helped create the curriculum for this course by surveying alumni of the McGill Medical Physics program and reviewing the instrumentation and computation courses offered in other CAMPEP-accredited medical physics programs in North America. I teach two thirds of the 3-credit class, including basic electronics relevant to medical physics as well as computer programming and a computer programming project.

- MDPH 603—Radiotherapy laboratory (instructor for one laboratory session per year)
- MDPH 396—In 2014, I proposed and helped set up this term research course for undergraduate students
- MDPH 614—Physics of Diagnostic Radiology. I was the teaching assistant for this 3-credit class in 2009 and 2010 and I taught two lectures (Fluoroscopy and Digital Radiography)

As a clinical medical physicist, I play an active role in continuous clinical teaching. Notable contributions include:

- Radiation physics for McGill radiology medical residents—I teach one 3-hour class per year
- Residency notes—my clinical physics notes, written during my time as a physics resident, and continuously updated as I accumulate clinical experience, are available online and are used by the McGill medical physics residents as well as medical physics residents elsewhere in the world.

PhD Committee Membership

- Aimee Castro (current student)—Ingram School of Nursing, McGill University
- Dr. Graham Smith (graduated 2019)—Radiation Oncology, Queen's University, Kingston

Examination Committee Experience

- 2020: PhD internal examiner for Mr. Joel Mullins in the Faculty of Science, McGill University
- 2020: PhD examination committee for Dr. Zaki Ahmed in the Faculty of Science, McGill University
- 2020: PhD examination committee for Dr. Stella Xing in the Faculty of Science, McGill University
- 2018: PhD examination committee for Dr. Igor Kozlov in the Faculty of Science, McGill University
- 2017: PhD examination committee for Dr. Martin Carrier Vallières in the Faculty of Science, McGill University
- 2017: Pro-dean for one PhD oral defense examination in the Faculty of Science, McGill University
- 2016-2019: Oral examination committee for the membership exam of the CCPM (Canadian College of Physicists in Medicine)
- 2012-2014: McGill University external examiner for four M.Sc. theses

Teaching Courses Attended

As a mature graduate student (McGill Medical Physics 2008-2010), I got to re-experience teaching from the student's perspective after almost ten years out of the didactic environment. I saw that good researchers/professionals do not automatically make good teachers. With this in mind, whenever I can, I actively participate in teaching workshops offered by McGill's Teaching and Learning Services. Thus far I have participated in the following workshops:

- 2018: Supervision Orientation for New Faculty
- 2018: Leading Change, Thriving, not just surviving
- 2017: Conflict Management

- 2015: Recognizing and Supporting Students At-Risk
- 2013: Supervisory Alliance
- 2012: Introduction to Course Design and Teaching—this workshop was particularly useful when designing the Health Physics class

Other Teaching Experience

- 2017 (repeated in 2018): Lecturer for two 1.5 hour classes in the online course "Radiation Treatment Incident Investigation and Learning Course" presented by the Canadian Partnership for Quality Radiotherapy
- 2016: Chair of the sub-committee tasked with creating a new "Instrumentation and Computation" class within the McGill Medical Physics Unit CAMPEP-accredited M.Sc. program
- 2001-2002: Senior tutor, Department of Experimental Physics, University College Dublin
- 2000-2002: Design and maintenance of website for 1st-year Engineering Physics class, University College Dublin
- 1999-2001: Research Demonstrator, Department of Experimental Physics, University College Dublin
- 1998: External examiner for final-year project on Cosmic-Ray Muons, Department of Physics & Astronomy, Queen's University Belfast
- 1997: Mathematics tutor for undergraduate Environmental Science students, Alaska Pacific University, Anchorage, AK

Academic Committee Membership

I am an active member of all the standing committees within the McGill Medical Physics Unit. These include:

- The Admissions Committee for M.Sc. and Ph.D. candidates;
- The Curriculum Committee;
- The Alumni/Scholarship Committee, and
- The Visiting Speaker Committee.

Within the Research Institute of the MUHC, I am an active member of the Cancer Research Program PI committee and the committee for development of a Centre for Biological Therapeutics.

During my undergraduate studies (1994-1998), I was the undergraduate Physics student representative on the Joint student-staff Consultative Committee (JCC) for the School of Mathematics and Physics at Queen's University Belfast.

Academic Outreach

Medical physics, as a profession, depends on high-calibre students entering our academic programs and on recognition within our higher-education and healthcare institutions. I am a strong believer in public outreach for medical physics. Within McGill University, I have led the following projects:

- Canadian Undergraduate Physics Conference 2019—career panel speaker
- 2018 International Day of Medical Physics open-house at the McGill University Health Centre
- Development of a updated, modern webpage for the Medical Physics Unit
- Conception and development of a logo for the Medical Physics Unit
- Creation of a Facebook group for the alumni and friends of the Medical Physics Unit

I also participate in McGill University's Office of Undergraduate Research *Soup and Science* seminar series to explain Medical Physics to undergraduate students, the *Physics Matters* public outreach seminar series in the Department of Physics, the *Public Fora* of the Goodman Cancer Centre, and various public lectures of the Cedars Cancer Foundation.

Student Supervision and Mentoring

Student supervision is an important component of my research. In general terms, my research projects entail either computationally-intensive informatics, radiation detection, or both. Either way, significant understanding of the underlying medical physics is required and acquired by my student colleagues.

Current Students (Medical Physics, unless otherwise stated)

Student	Year Started	Studies	My Role	Subject
Logan Montgomery	2016	Ph.D.	Primary supervisor	Neutron spectrometry and modelling of neutron-induced DNA damage
Haley Patrick	2018	Ph.D.	Primary supervisor	Dose accumulation and patient-reported outcomes for prostate cancer patients
Hossein Naseri	2018	Ph.D.	Primary supervisor	Natural language processing, patient-reported outcomes and radiomics to predict pain in patients with bone metastases
Laura Paterson	2018	Ph.D.	Co-supervisor with Dr. Norma Ybarra	An examination of the biological effects of thermal neutrons
Felix Mathew	2019	Ph.D.	Primary supervisor	Neutron spectrometry and post-irradiation single-cell sequencing
Kayla O'Sullivan	2020	M.Sc.	Primary supervisor	Radiotherapy data donation using the Opal patient portal
James Manalad	2020	M.Sc.	Primary supervisor	Modelling of neutron-induced DNA damage using TOPAS
Anton Gladyr	2020	M.Sc.	Primary supervisor Computer Science	Development of a framework for blockchain data donation using the Opal patient portal
Oscar Décéus	2019-2020	B.Sc.	Project supervisor	Connecting a weighing scales to the Opal patient portal (Computer Engineering Capstone project)
Kevin Chuong	2019-2020	B.Sc.	Project supervisor	Connecting a weighing scales to the Opal patient portal (Computer Engineering Capstone project)

Past Students

Student	Years	Studies	My Role	Current Position
Katherine Mohsen (Nursing)	2018-2020	M.Sc.	Co-supervisor with Dr. Andrea Laizner	Clinical nurse, MUHC
Esteban Sepulveda	2019-2020	M.Sc.	Primary supervisor	Medical physics resident, CHUM, Montreal
Jonathan Yeo	2019-2020	M.Sc.	Primary supervisor	Medical physicist, Singapore
Aixa Andrade	2019-2020	M.Sc.	Primary supervisor	Research assistant under my supervision
Dylan Nazareth (Communications)	Summer 2020	Undergraduate internship	Primary supervisor	B.Sc. student, Communications, Concordia University
Felix Mathew	2018-2019	M.Sc.	Primary supervisor	Ph.D. student under my supervision
Chris Lund	2018-2019	M.Sc.	Primary supervisor	Ph.D. student, Physics, McGill University
Stacey Beard (CompSci)	2018-2019	Intern	Primary supervisor	B.Sc. student, Computer Science, McGill University
Marco DiFransesco	Summer 2019	Undergraduate MDPH 396	Primary supervisor	M.Sc. student, Medical Physics, McGill University
Silan He	Fall 2018	Undergraduate MDPH 396	Primary supervisor	B.Sc. student, Computer Science, McGill University
Michel Ma	Fall 2018	Undergraduate MDPH 396	Primary supervisor	B.Sc. student, Computer Science, McGill University
Jeremy Xie	Fall 2018	Undergraduate MDPH 396	Primary supervisor	B.Sc. student, Computer Science, McGill University
Timothy Cheng	Fall 2018	Undergraduate MDPH 396	Primary supervisor	B.Sc. student, Computer Science, McGill University
Irene Woo	Fall 2018	Undergraduate COMP 400	Co-supervisor with Prof. Laurie Hendren	B.Sc. student, Computer Science, McGill University
Thomas Tendron	Summer 2018	Summer student	Co-supervisor with Prof. Laurie Hendren	B.Sc. student, Computer Science, McGill University
Stacey Beard	Summer 2018	Summer student	Co-supervisor with Prof. Laurie Hendren	B.Sc. student, Computer Science, McGill University
Yuan Chen	Summer 2018	Summer student	Co-supervisor with Prof. Laurie Hendren	B.Sc. student, Computer Science, McGill University
Nathan Drezner	Summer 2018	Summer student	Co-supervisor with Prof. Laurie Hendren	B.Sc. student, Computer Science, McGill University
Youngsun Jin	Summer 2018	Summer student	Co-supervisor with Prof. Laurie Hendren	B.Sc. student, Computer Science, McGill University
Shihang Zhu	Summer 2018	Summer student	Co-supervisor with Prof. Laurie Hendren	B.Sc. student, Computer Science, McGill University
Briana Cabral	Summer 2018	Summer student	Co-supervisor with Prof. Laurie Hendren	B.Sc. student, Computer Science, McGill University
Tongyou Yang	Summer 2018	Summer student	Co-supervisor with Prof. Laurie Hendren	B.Sc. student, Computer Science, McGill University

Student	Years	Studies	My Role	Current Position
Anton Gladyr	Summer 2018	Summer student	Primary supervisor	Mitacs student, Ukraine
Arthur Bergamaschi	Summer 2018	Summer student	Primary supervisor	Mitacs student, Brazil
Hui Wang	Summer 2018	Summer student	Primary supervisor	B.Sc. student, Computer Science, McGill University
Kelly Agnew	Summer 2018	Summer student	Primary supervisor	B.Sc. student, Computer Science, McGill University
Victor Matassa	2017-2018	Undergraduate internship (Physics, Comp. Sci. Concordia U.)	Primary supervisor	Medical physics M.Sc. student, McGill University
Wissal Kobeissi	Winter 2018	Undergraduate MDPH 396	Primary supervisor	B.Sc. student, Computer Science, McGill University
Youngsun Jin	Winter 2018	Undergraduate MDPH 396	Primary supervisor	B.Sc. student, Computer Science, McGill University
Chloe Litrico	Winter 2018	Undergraduate MDPH 396	Primary supervisor	B.Sc. student, Computer Science, McGill University
Brendon McGuinness	Winter 2018	Undergraduate MDPH 396	Primary supervisor	B.Sc. student, Computer Science, McGill University
Kelly Agnew	Winter 2018	Undergraduate PHYS 449	Primary supervisor	B.Sc. student, Physics and Computer Science, McGill University
Isaac Sultan	Winter 2018	Undergraduate MDPH 396	Primary supervisor	B.Sc. student, Computer Science, McGill University
James Brace	Summer, Fall 2017	Undergraduate internship (Comp. Sci., McGill)	Co-supervisor with Prof. Laurie Hendren	Medical physics M.Sc. student, McGill University
Haley Patrick	2017-2018	M.Sc.	Primary supervisor	Medical physics resident, MUHC
Julia Albers	2017-2018	M.Sc.	Co-supervisor with Mr. William Parker	Medical physics resident, CHUM/MUHC
Georges Al Makdessi	2016-2017	M.Sc.	Primary supervisor	Medical physics resident, MUHC
Hui Wang	Fall 2017	Undergraduate MDPH 396	Primary supervisor	B.Sc. student, Mathematics and Computer Science, McGill University
Wen Zhang	Winter 2017	Undergraduate MDPH 396	Primary supervisor	B.Sc. student, Statistics and Computer Science, McGill University
Jeremie Poisson	Winter 2017	Undergraduate MDPH 396	Primary supervisor	B.Sc. student, Computer Science, McGill University
Selwynne Hawkins	Winter 2017	Undergraduate MDPH 396	Primary supervisor	B.Sc. student, Physics and Physiology, McGill University
Aiten Ismailova	Winter 2017	Undergraduate MDPH 396	Primary supervisor	B.Sc. student, Physiology, McGill University
Herthana Kandasamy	Fall 2016	Undergraduate MDPH 396	Primary supervisor	B.Sc. student, Anatomy & Cell Biology, McGill University

Student	Years	Studies	My Role	Current Position
Jeremy Ahearn	Fall 2016	Undergraduate MDPH 396	Primary supervisor	B.Sc. student, Physics, McGill University
Logan Montgomery	2015-2016	M.Sc.	Primary supervisor	Ph.D. student under my supervision
Marc Palaci-Olgun	Summer 2016	Summer student	Primary supervisor	Ph.D. student, Aeronautical Engineering, U. of Toronto
Thomas Tendron	Summer 2016	Summer student	Primary supervisor	B.Sc. student, Computer Science, McGill University
Amro Gazlan	Summer 2016	Summer student	Primary supervisor	B.Sc. student, Computer Science, McGill University
Sarah Kordlouie	Summer 2016	Summer student	Primary supervisor	Cegep student, Marianopolis College
Briana Cabral	Summer 2016	Summer student	Primary supervisor	Cegep student, Marianopolis College
Lee Alan Dennis	Winter 2016, Summer 2016	Undergraduate CHEE 495, Summer student	Primary supervisor	B.Sc. student, Chemical Engineering, McGill University
Yacine Sibous	Winter 2016	Undergraduate MDPH 396	Primary supervisor	B.Sc. student, Physics & Computer Science, McGill University
David Hererra	Summer 2015	Summer student	Primary supervisor	Research assistant under my supervision
Mehryar Keshavarz	Summer 2015	Summer student	Primary supervisor	Final year of undergraduate studies, McGill University
Jeremy Ahearn	Summer 2015	Summer student	Primary supervisor	Second-to-final year of undergraduate studies, McGill University
Justin Wainberg	Winter 2015, Summer 2015, 2016	Undergraduate MDPH 396, Summer student	Primary supervisor	Studying for medical school entrance exam
Alvin Leung	Winter 2015	Undergraduate MDPH 396	Primary supervisor	Graduate student, Computer Science, U. of Toronto
Robert Maglieri	2013-2015	M.Sc.	Primary supervisor	Research assistant software developer, McGill University Health Centre
Ackeem Joseph	2012, 2013	Summer student	Primary supervisor	Graduate student under my supervision
Rafael Khatchadourian	2011-2013	M.Sc.	Primary supervisor	Clinical physicist, Hôpital Maisonneuve-Rosemont

Graduate Student Mentoring

During my time as an astrophysics postdoctoral associate, I mentored a number of graduate students from various universities. These included:

- 2007-2008: Harvard University predoctoral fellow Mark Theiling
- 2006-2007: Purdue University Ph.D. candidate Ben Zitzer
- 2003-2006: McGill University Ph.D. candidates Luis Valcarcel, Thomas Lindner and Michael McCutcheon

Professional Activities

Conference Program Chairs

- The joint International Conference on the use of Computers in Radiotherapy (ICCR) and the international conference on Monte Carlo Techniques for Medical Applications (MCMA) iccr-mcma.org.

  I led the winning bid to host the 19th ICCR in Montreal in June 2019. Subsequently, the ICCR joined with the MCMA to host a joint conference. I co-chaired the local arrangements committee of both conference and the scientific committee of ICCR with Prof. Jan Seuntjens. Both conferences were a huge success with 549 delegates attending from 30 countries.

  Feedback from delegates was very positive overall. I quote three anonymous comments received in the post-event survey:

  > "Excellent conference, energy was palpable, good science, nice people, night out was a lot of fun."
  >
  > "Best conference I've attended. Great job by the organizing committee. Also the conference app was outstanding. Great idea!"
  >
  > "Congratulations to the organizers, volunteers, AV team, and conference management team. This was a SMOOTH-running conference."

- Canadian Winter School for Quality and Safety in Radiation Oncology—chair and course director 2015 and 2016

  The annual Canadian Winter School is a four-day, multi-professional, continuing education course for radiation medicine professionals, hosted by COMP (the Canadian Organization of Medical Physicists). Each year it attracts approximately 100 delegates from Canada, the US, and further afield. As chair and course director in 2015 and 2016, I recruited the organizing committee, chaired bi-weekly conference calls, invited ten renowned faculty members each year, and coordinated the curriculum, the program, and the abstract submission/review process.

  I quote two comments that were received in the anonymous delegate surveys conducted by COMP after the 2015 Winter School in Kelowna, BC and the 2016 Winter School in Montebello, QC:

  > "This was an excellent, very well organized event. John Kildea and the rest of the organizing committee did a fabulous job." (2015)
  >
  > "This was the most phenomenal work experience I ever had! If possible, continue your conference in a similar format as it was so conducive to networking & learning. Amazing!!" (2016)

Conference/Workshop Program Membership

- 2020: Canadian Winter School for Quality and Safety in Radiation Oncology
- 2019: Monte Carlo Techniques for Medical Applications (MCMA) International Scientific Committee
- 2015: Scientific workshop of the Association québécoise des physicien(ne)s médicaux cliniques

- 2014: Canadian Winter School for Quality and Safety in Radiation Oncology
- 2013: Race director for the Fun Run of the 2013 Joint Scientific Meeting of the Canadian Organization of Medical Physicists and the Canadian Association of Radiation Oncologists
- 2007: VERITAS First Light Fiesta—a scientific workshop held in conjunction with the first light of the VERITAS telescope array in Arizona

National and International Committee Membership

- 2019-present: Chair of the Canadian Big Radiotherapy Data Initiative of the CPQR (Canadian Partnership for Quality Radiotherapy).
- 2017-present: Vice chair of the steering committee of the CPQR, working alongside CPQR chair Dr. Michael Milosevic. The CPQR is a pan-Canadian alliance of the three national professional associations involved in Canadian radiotherapy: CARO, COMP and CAMRT. The CPQR aims to promote quality in Canadian radiotherapy through ground-up initiatives and multi-professional community engagement.
- 2017-present: Chair of the pan-Canadian advisory committee for the National System for Incident Reporting—Radiation Treatment (NSIR-RT). In this capacity, I initiated a quarterly newsletter to the Canadian Radiation Oncology community to report back on lessons learned from nationally-submitted incident data.
- 2017-present: Member of Task Group 288 (Radiation Incident Narrative) of the American Association of Physicists in Medicine (representing the Canadian radiation oncology community).
- 2017: Member of the Radiation Therapy Incident Reporting Committee of the International Atomic Energy Agency (representing the Canadian radiation oncology community).
- 2017-present: Member of the Radiation Therapy Software Safety Committee of the International Atomic Energy Agency (representing the European Society for Radiotherapy and Oncology).
- 2016-2017: Member of the steering committee of the CPQR (Canadian Partnership for Quality Radiotherapy). Appointed in March 2016 to represent COMP (Canadian Organization of Medical Physicists).
- 2016-2019: Member of the oral Membership examination committee of the CCPM (Canadian College of Physicists in Medicine)
- 2015-present: Member of the Radiation Oncology Safety Committee of the European Society for Radiotherapy and Oncology
- 2014-2016: Science and Education Committee of the Canadian Organization of Medical Physicists (Winter School representative)

Clinical Experience

Regular Clinical Duties

In January 2017, I transitioned from clinical to academic medical physics. I maintain certain clinical responsibilities and provide occasional clinical support to the Department of Medical Physics at the MUHC. My clinical experience includes:

- HDR Brachytherapy treatment planning and treatment support, including eye-plaque brachytherapy
- External beam radiotherapy treatment support (photons and electrons)
- Treatment plan physics quality control (chart checks)

- Tomotherapy treatment planning (2010-2015)
- Quality assurance (weekly, monthly, quarterly, annually) of radiotherapy equipment (2010-2017)
- Patient-specific dosimetric quality assurance for Tomotherapy treatment plans (2010-2014)
- Coordination of personnel dosimetry (TLD distribution and collection) for the medical physics team (2012-2016)

Additionally, I am the *go-to* clinical database programmer for the Cedars Cancer Centre where I spearhead a number of ongoing software projects. Please see the Notable Clinical Research Initiatives section below for details.

Incident Reporting Departmental Newsletter

In 2017, I initiated an internal newsletter at the MUHC to promote internal conversations about the importance and benefits of incident reporting in radiation oncology.

Shielding Design, Radiation Surveys, Acceptance and Commissioning

In May 2015, our radiotherapy department moved to a new facility (MUHC Glen site) with new bunkers, linacs, and QA equipment. I was part of the physics team that undertook the initial shielding design and subsequent radiation surveys for the new bunkers and I participated in the acceptance and commissioning of the linacs and QA equipment.

To obtain access to the construction site, I undertook the required 30-hour Quebec construction safety course (Cours Santé et sécurité générale sur les chantiers de construction) and obtained the ASP construction card.

Clinical/Administrative Committee Membership

Within the McGill University Health Centre I am an active member of the following clinical committees:

- 2019-present: Digital Health Think Tank for the digital transformation of the MUHC (co-chair of the People, Culture and Work Organisation working group with Dr. Alan Biron)
- 2015-2018: Brachytherapy Physics committee
- 2015-2016: Risk Management committee for Radiation Oncology (chair)
- 2014-2015: Transition committee for the relocation of Radiation Oncology services from the Montreal General Hospital to the Cedars Cancer Centre
- 2014-2015: Executive committee for the Division of Radiation Oncology
- 2014: Pacemaker and implanted medical devices working group (chair)
- 2011-present: Radiation Safety Committee for Medical Physics and Radiation Oncology
- 2011-present: Quality assurance committee for Medical Physics and Radiation Oncology

Notable Clinical Research Initiatives

I led the development and implementation of the following clinical initiatives within the departments of Medical Physics and Radiation Oncology at the McGill University Health Centre:

Opal (opalmedapps.com): Opal is an award-winning patient portal project that I co-lead at the Research Institute of the McGill University Health Centre with my radiation oncologist colleague Dr. Tarek Hijal. Until her passing in May 2019, the project was also co-led by breast cancer patient and McGill computer science professor Laurie Hendren. Using Opal, patients have access to their data inside hospital information systems, including appointment schedules, clinical notes, lab results and symptom questionnaire. Fundamentally, all information in Opal is explained using education materials that are personalized to each patient's condition and phase of treatment.

Our research collaboration, known as the Opal Health Informatics Group (O-HIG) was groundbreaking in that it involved a patient (Laurie) upfront and centre as an equal member of the leadership team. This took quite a bit of getting used to for the healthcare system, which typically sees patients as token members of research teams. But, through persistence, and through a process of "participatory stakeholder co-design", we worked from the beginning to include the voice of all stakeholders in the design and development of Opal (Kildea et al. 2019). This ensured that the final product was person-centred for patients, acceptable to clinicians (i.e. upfront buy-in), and feasible from a technical perspective.

Opal has been very positively received by patients and been recognized by a number of national and international awards, including the 2019 Prix d'excellence–Coup de coeur des ministres, considered the highest accolade within the Quebec healthcare system, and the Quebec eHealth solution of the year for 2019. At the Research Institute of the MUHC, our project to incorporate blockchain data donation into Opal to facilitate real-world evidence research was awarded the 2019 Trottier-Webster Award for Innovation, out of 30 nominations.

The Opal software development team currently comprises eight full-time and five part-time staff. Operationally, the project is currently funded by MUHC hospital foundations. We are presently in discussion with the Quebec government to roll-out Opal across the province and it has been listed as a ministerial priority for cancer care. From a research standpoint, the Opal Health Informatics Group has secured funding from the Medteq consortium (to incorporate a pediatric component into Opal), from the Oncopole consortium (to incorporate patient peer support using a "dating algorithm" based on artificial intelligence), and from the Trottier and Webster foundations for research around blockchain data donation.

SaILS: The Safety and Incident Learning System is software that was originally developed at the Ottawa Hospital Cancer Centre. Under my supervision, and with funding from the CPQR, graduate student Logan Montgomery re-developed SaILS to incorporate the incident reporting taxonomy of the National System for Incident Reporting developed by the Canadian Institute for Health Information. SaILS-NSIR-RT is now in routine clinical use at the MUHC and at the Southlake Cancer Centre in Ontario. This project was presented by Logan Montgomery at the 2016 Canadian Winter School on Quality and Safety in Radiation Oncology and at the 18th International Conference on the use of Computers in Radiotherapy in London, England, June 2016. SaILS received a Prix de cancérologie award from La Direction générale de cancérologie du Québec in 2017. It is described in Montgomery et al. 2018.

Depdocs: This is an information-sharing platform that I developed with student Ackeem Joseph. It facilitates collaboratively-written documents for healthcare, such as policies, procedures, change logs, meeting minutes, and problem reports. The software was developed on the Drupal framework. Within the MUHC, the system is used by 210 users to access over 800 documents.

Additionally, 52 committees use Depdocs to manage their private documents and schedules and more than 1,100 problem reports and change logs have been recorded using the system during six years of operation. I personally use Depdocs with my students to manage our collaborative research.
A public version of Depdocs is available at depdocs.com. Depdocs was presented as a poster at the 2014 Annual Scientific Meeting of the Canadian Organization of Medical Physicists (Medical Physics, 41(8):17–17, 2014).

DVH Registry: This database software allows radiotherapy planners and physicians to register dose volume histograms from the treatment plans that they have prepared. Registered plans may then be used to benchmark future plans. The system is in clinical operation and is used to benchmark treatment plans for prostate cancer and pediatric craniospinal irradiation. Posters describing the DVH Registry were presented at the 2013 and 2014 Congresses of the Pediatric Radiation Oncology Society and at the ESTRO 33 conference in Vienna, 2014.

AEHRA: This stands for Automated Electronic Health Record Auditing. It is a software tool to extract relevant data from an electronic health record system and audit them for outliers that might be indicative of errors. The system was developed with student Ackeem Joseph. Although it did not enter into routine clinical operation, the software framework we developed for it has been used for the ATS and Opal projects. A poster describing the pilot version of AEHRA was presented at the 2014 Annual Scientific Meeting of the Canadian Organization of Medical Physicists (Medical Physics, 41(17), 2014).

ATS: Aria to Streamline is an interface to send clinical documents from the Aria information system (Varian Medical Systems Inc.) in Radiation Oncology to Oacis (Telus Health Inc.), the MUHC's electronic medical record system. ATS was developed with student Ackeem Joseph and is based on the architecture that we put in place for the AEHRA project. It is in clinical operation and has been used to transfer approximately 20,000 clinical documents in five years of operation. A poster describing ATS was presented at the 18th International Conference on the use of Computers in Radiotherapy in London, England, June 2016.

ORMS: The Online Room Management System is a software and hardware framework that I wrote to manage the Radiation Oncology waiting room at the MUHC. It incorporates checkin kiosks, virtual waiting rooms and a screen call system to notify patients when they are called for treatment/examination. In addition to managing the waiting room, ORMS provides our team with valuable timestamps of all patient encounters. ORMS was presented at the International Conference on the use of Computers in Radiotherapy in London, England, June 2016. In March 2020, at the start of the COVID-19 pandemic, ORMS was modified to allow MUHC radiation oncology patients to check-in for their appointments using SMS message, allowing them to wait in their cars in a dedicated parking lot rather than sitting with other patients in the waiting room. Feedback from users has indicated that numerous patients credited the system as the reason they continued radiotherapy during the pandemic. See article in the Montreal Gazette.

The above initiatives, although not always immediately fruitful in terms of research publications, represent important clinical projects that required project management, inter-professional collaboration and technical skills. As noted above, each project, in its own way, is starting to bear fruit in terms of improved clinical practice and the development of databases that will be used for future knowledge-based translational research.

Clinical Courses Attended

- 2016: MUHC Patient Education Office Workshop: Writing Clearly—Plain Language, Design and Patient Education Material
- 2015: MUHC Patient Education Office Workshop: Working Together and Learning from Each Other
- 2015: Canadian Winter School for Quality and Safety in Radiation Oncology, Kelowna, BC (chair)
- 2014: McGill Teaching and Learning Services—Privacy and Confidentiality Workshop
- 2014: Canadian Winter School for Quality and Safety in Radiation Oncology, Quebec City, QC (committee member)
- 2014: TrueBeam for Physicist, Varian Medical Systems training course, Las Vegas, NV
- 2012: Canadian Winter School for Quality and Safety in Radiation Oncology, Whistler, BC (delegate)
- 2011: Canadian Winter School for Quality and Safety in Radiation Oncology, Mont Tremblant, QC (delegate)
- 2010: Aria Custom Reports, Varian Medical Systems training course, Las Vegas, NV

Clinical Outreach

Medical physicists have more to offer patients than our traditional role calls for. We understand and we can explain to patients and family members how radiation is produced and how it interacts with tissue. We often underestimate the usefulness of our knowledge and our role in reassuring patients that their treatments are safe. With this in mind, I proposed and led the following patient education initiatives:

- Patient education booklet (Your Radiotherapy Journey)—each Radiation Oncology patient at the MUHC is given a copy of this booklet when they start radiotherapy. Initial funding was provided by the Rossy Cancer Network. Ongoing support for the booklet is provided by Cedars CanSupport.
- Patient education video (Preparing for your Radiotherapy Journey—A Quick Tour)—this video, produced jointly with the Jewish General Hospital, provides patients with a visual tour of their radiotherapy treatment pathway. Funding provided by the Rossy Cancer Network. The YouTube version of the video has been viewed over 5,000 times (as of September 2020).

Other Information

Technical Skills

- Programming languages: C++, C, Fortran, CORBA, Javascript, Perl, AngularJS, PHP, SQL, GPU programming
- Databases and reporting tools: MySQL, MSSQL, Firebase, Infomaker
- Analysis packages: ROOT, Matlab, IDL
- Markup/web tools: LaTeX, html, XML, CSS, Drupal
- Monte Carlo: Geant4, MCNP, Kascade (cosmic rays), CORSIKA (cosmic rays)

Languages

English (fluent), Irish, French and Spanish (conversational)

Contributions

Media Interviews

1. November 2019: Global News interview regarding Opal and the Trottier-Webster award.
2. June 2019: CTV News interview regarding the Prix d'excellence award for Opal.

Invited Talks and Lectures

International

1. **Invited conference presentation**, *Implementing standardized PROs at McGill*; AAPM Science Council Practical Big Data Workshop, Ann Arbor, Michigan, June 2018
2. **Invited conference presentation and round-table discussion panelist**, *the Oncology Portal and Application*; Colloque international : Applications mobiles en santé/Mobile health applications, Université du Québec à Montréal, November 2016.
3. **Invited conference presentation**, *The Desired and Undesired Biological Effects of Ionizing Radiation, with a focus on Neutron-Induced Carcinogenic Effects (NICE)*; The 3rd Educational Symposium on Radiation and Health by Young Scientists (ESRAH2016), Sapporo, Japan, October 2016.
4. **Invited lecturer**, *Database Rudiments and Clinical Use*; Continuing Education Program, World Congress on Medical Physics and Biomedical Engineering, Toronto, June 2015.
5. **Invited speaker**, *Quality and Safety in Canadian Radiation Oncology*; University College Galway, Ireland, November 2014.
6. **Invited lecturer**, *Quality and Safety in Radiation Oncology*; Presentation to final-year students, Division of Radiation Therapy, Trinity College Dublin, November 2014.
7. **Invited talk**, *The Solar Tower Atmospheric Cherenkov Effect Experiment*, Workshop on TeV Particle Astrophysics, Fermilab, Batavia, 2005.
8. **Invited talk**, *The Solar Tower Atmospheric Cherenkov Effect Experiment*, Frontier Science 2004—Physics and Astrophysics in Space, Frascatti, Italy, 2004.

National

9. **Invited conference presentation**, *Patient-Reported Outcomes: Tools that help us better understand what patients need, and how this will impact professional roles*, Mont Tremblant, Quebec, February 2020.
10. **Invited dinner speaker with Dr. Tarek Hijal**, *Opal—Your Medical Information in Your Hands*, Meeting of the Board of Directors of the Canada Health Infoway, Montreal, September 2019.
11. **Invited speaker**, *New technologies in cancer care*, Best of ASCO, Montreal, June 2019.
12. **Keynote address**, *Integrating patient flow, patient-reported outcomes, and big data in cancer care - the McGill University approach*, Atlantic Radiotherapy Conference, Halifax, Nova Scotia, June 2019.
13. **Invited colloquium speake**r, *Opal - Empowered Patients, Informed Research*, Carleton University Medical Physics, January 2019.
14. **Invited conference presentation**, *Linking patient outcomes to Radiation Oncology plan parameters—The importance of standardized language*; Canadian Winter School on Automation and Personalized Care in Radiotherapy, Lake Louise, Alberta, February 2018.

15. **Keynote address**, *Quality, Professional, and Regulatory issues in Medical Physics*; the Annual Scientific Meeting of the Canadian Organization of Medical Physicists, St John's, NL, July 2016.
16. **Invited speaker with Logan Montgomery**, *The Safety and Incident Learning System*, The Ottawa Hospital Cancer Centre, June 2016.
17. **Invited speaker**, *Radiation Oncology Knowledge Sharing at the McGill University Health Centre*; Princess Margaret Hospital, Toronto, May 2016.

Provincial

18. **Invited presentation**, *Opal : Patients autonomisés, Recherche bonifiée*, Meeting of Quebec hospital directors of information technology, Quebec City, October 2019.
19. **Invited presentation**, *Opal : Patients habilités, Recherche informée*, Meeting of Quebec hospital CEOs, Quebec City, September 2019.
20. **Invited colloquium speaker**, *Engaging patients to improve clinical care and research using Opal - a patient portal and patient-reported outcomes reporting tool*, CHU de Quebec Centre de recherche, Quebec City, April 2019.
21. **Invited speaker with Dr. Tarek Hijal**, *Empowering patients and informing researchers using the Opal patient portal*, MUHC Symposium on Technology Assessment in Practice; Montreal, July 2019.
22. **Invited speaker**, *Developing and integrating a patient portal and patient-reported outcomes collection tool into routine radiation oncology practice*, CHUQ Clinical Radiation Oncology speaker series, Quebec City, April 2019
23. **Invited conference presentation with Dr. Tarek Hijal**, the Oncology Portal and Application; Forum de l'industrie de la santé de Québec, December 2018.
24. **Invited conference presentation with Tarek Hijal and Laurie Hendren**, the Oncology Portal and Application; INNOVE-ACTION Conference - Réinventer la santé : intelligence augmentée et innovations, CHUM, Montreal, November 2018.
25. **Invited speaker with Tarek Hijal**, the Oncology Portal and Application; Colloque annuel du Réseau de cancérologie de la Montérégie, La Prairie, Quebec, June 2018

Local

26. **Invited presentation**, The Opal Patient Portal; Annual General Meeting of the McGill University Health Centre, Montreal, November 2019.
27. **Invited public presentation with Tarek Hijal**, The Opal Patient Portal; Goodman Cancer Centre Public Forum on AI & machine learning: the future of cancer detection and treatment is now, Montreal, October 2019.
28. **Invited speaker (with Tarek Hijal and Jamil Asselah)**, the Oncology Portal and Application; Dept. Of Medicine Rounds, McGill University Health Centre, Montreal, July 2018.
29. **Invited speaker**, NICE and ROKS: Neutron-Induced Carcinogenic Effects and Radiation Oncology Knowledge Sharing; Bioengineering and Biomedical Engineering Research Seminar, McGill University, May 2018
30. **Invited speaker (with Tarek Hijal and Laurie Hendren)**, the Oncology Portal and Application; Oncology Rounds, Charles LeMoyne, Longeuil, QC, January 2018.
31. **Invited speaker**, Radiation Oncology Knowledge Sharing at the McGill University Health Centre; Computer Research Institute of Montreal, January 2018.

32. **Invited speaker (with Tarek Hijal and Laurie Hendren)**, the Oncology Portal and Application; Radiation Oncology Rounds, McGill University Health Centre, Montreal, November 2017.
33. **Invited speaker**, Radiation Oncology Knowledge Sharing at the McGill University Health Centre; Medical Physics seminar series Centre hospitalier de l'Université de à Montréal, November 2017.
34. **Invited speaker (with Tarek Hijal and Laurie Hendren)**, the Oncology Portal and Application; Medical Grand Rounds, Faculty of Medicine, McGill University, Montreal, October 2016.
35. **Invited speaker (with Tarek Hijal and Laurie Hendren)**, the Oncology Portal and Application; Meeting of the board of directors of the McGill University Health Centre, Montreal, April 2016.
36. **Invited speaker (with Tarek Hijal and Laurie Hendren)**, Realistic Knowledge-based Waiting Times for Radiation Oncology Patients; Meeting of the Quality and Risk Committee of the McGill University Health Centre, January 2016.
37. **Invited speaker (with Tarek Hijal and Laurie Hendren)**, Realistic Knowledge-based Waiting Times for Radiation Oncology Patients and the Health Informatics Group; Board meeting of the Montreal General Hospital Corporation, January 2016.
38. **Invited speaker (with Tarek Hijal and Laurie Hendren)**, Realistic Knowledge-based Waiting Times for Radiation Oncology Patients; Patient Safety Week, MUHC, October 2015.
39. **Invited speaker (with Tarek Hijal and Laurie Hendren)**, Addressing the Pain of Waiting—a Health Informatics Approach; Oncology Grand Rounds, MUHC, March 2015.

Conference Workshops Organized

- *Educational symposium—International Collaborative Efforts to Increase Quality of Radiotherapy Care Through Capture and Use of Standardized Data*, with Dr. Amanda Caissie, CARO Annual Scientific Meeting, Halifax, NS, October 2019.
- *Educational Lecture—An Introduction to Patient-Reported Outcomes in Radiation Oncology*, International Conference on the use of Computers in Radiation Therapy, Montreal, June 2019.
- *Joint Theme Symposium—Patterns of Practice on behalf of the CPQR*, CARO-COMP Joint Scientific Meeting, Montreal, September 2018.
- *Hands-on workshop—Using e-tools to put patients at the centre of their care*, with Stacey Beard, CARO-COMP Joint Scientific Meeting, Montreal, September 2018.
- *Hands-on workshop—Retrieving data from databases*, with Ackeem Joseph, COMP-CARO Joint Annual Scientific Meeting, Montreal, September 2013.

Conference Sessions Chaired

- Opening and closing sessions; the International Conference on the Use of Computers in Radiotherapy, Montreal, June 2019.
- Big Data Plenary Session II; the International Conference on the Use of Computers in Radiotherapy, Montreal, June 2019.
- Session 33A: Treatment Planning and Evaluation, Radiation Sources and Beams I; Monte Carlo Methods for Medical Applications (MCMA) Conference, Montreal, June 2019.
- Machine Learning, Knowledge-based Planning and Informatics; the Annual Scientific Meeting of the Canadian Organization of Medical Physicists, July 2016.

- Big data and automated data collection and analysis; the International Conference on the Use of Computers in Radiotherapy, London, England, June 2016.
- Clinical Engineering, Clinical Physics, and Patient Safety; World Congress on Medical Physics and Biomedical Engineering, June 2015.
- Topics in Radiation Therapy; the Annual Scientific Meeting of the Canadian Organization of Medical Physicists, July 2014.

Peer-reviewed Journal Publications

In the following list, primary authors who were my students are underlined.

[1] E. Sepulveda, C. Freeman, and J. **Kildea**. Standardization of csi treatment planning and its evaluation using a dvh registry. *Accepted for publication in the Journal of Applied Clinical Medical Physics*, 2020.

[2] H. M. Patrick, T. Hijal, L. Souhami, C. Freeman, W. Parker, L. Joly, and J. **Kildea**. A canadian response to the covid-19 pandemic: Is there a silver lining for radiation oncology patients? *Advances in Radiation Oncology*, 2020.

[3] H. Patrick, L. Souhami, and J. **Kildea**. Reduction of inter-observer contouring variability in daily clinical practice through a retrospective, evidence-based intervention. *Accepted for publication in Acta Oncologica*, 2020.

[4] H. Naseri and J. **Kildea**. Natural language processing of clinical reports to extract physician-reported pain score for cancer patients with bone metastases. *Submitted to the Journal of Biomedical Informatics*, 2020.

[5] L. Montgomery, A. Landry, G. Al Makdessi, F. Mathew, and J. **Kildea**. A novel mlem stopping criterion for unfolding neutron fluence spectra in radiation therapy. *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, 957:163400, 2020.

[6] K. Mohsen, J. **Kildea**, S. Lambert, and A. Laizner. Exploring cancer patients' perceptions of accessing and experience with using the educational material in the opal patient portal. *Accepted for publication in Supportive Care in Cancer*, 2020.

[7] F. Mathew, C. Chilian, L. Montgomery, and J. Kildea. Development of a passive gold-foil nested neutron spectrometer to validate the active current-mode he-3 measurements in a high neutron fluence rate radiotherapy environment. *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, 985:164662, 2020.

[8] F. Mathew, G. Al Makdessi, L. Montgomery, M. Evans, and J. **Kildea**. The impact of treatment parameter variation on secondary neutron spectra in high-energy electron beam radiotherapy. *Accepted for publication in the European Journal of Medical Physics (Physica Medica)*, 2020.

[9] C. Lund, G. Famulari, L. Montgomery, and J. **Kildea**. A microdosimetric analysis of the interactions of mono-energetic neutrons with human tissue. *Physica Medica*, 73:29–42, 2020.

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Other Publications

- J. Kildea, J. Seuntjens, S. Enger, ICCR-MCMA 2019, InterACTIONS (Newsletter of the Canadian Organization of Medical Physicists), October 2020 (forthcoming)
- J. Kildea, The 7th Canadian Winter School, InterACTIONS (Newsletter of the Canadian Organization of Medical Physicists), October 2015
- J. Kildea, Prof. Laurie Hendren—Patient Researcher at the Winter School, InterACTIONS (Newsletter of the Canadian Organization of Medical Physicists), April 2015

- D. Batchelar and J. Kildea, Quality Matters - Travaillons Ensemble ! Notes from the 6th Canadian Winter School on Quality and Safety in Radiation Oncology, InterACTIONS (Newsletter of the Canadian Organization of Medical Physicists), April 2015
- J. Kildea, Quality Matters - Travaillons Ensemble ! Notes from the 5th Canadian Winter School on Quality and Safety in Radiation Oncology, InterACTIONS (Newsletter of the Canadian Organization of Medical Physicists), April 2014

Accepted Conference Abstracts

In the following list, my students who presented are underlined.

International

1. Oral presentation: An examination of the mutational signature of X-ray irradiation using single-cell whole genome sequencing. J. Yeo, R. Li, Y.C. Wang, N. Ybarra, I. Ragoussis, J. Kildea, AAPM-COMP Virtual Meeting (2020)
2. Poster presentation: Towards the estimation of Neutron RBE for Mutagenesis by Simulating Clustered DNA Damage, L. Montgomery, A. Landry, C.M. Lund, J. Kildea, AAPM-COMP Virtual Meeting (2020)
3. Blue Ribbon e-poster presentation: Exploration of potential parameters that influence when to replan Head and Neck cancer patients. A. Andrade, G. Shenouda, J. Kildea, AAPM-COMP Virtual Meeting (2020)
4. Poster presentation: The feasibility of using radiomics to detect T Spine lytic bone metastases in simulation CT images, H. Naseri, M. David, J. Kildea, AAPM-COMP Virtual Meeting (2020)
5. Poster presentation: Standardization of CSI Treatment Planning and its Evaluation Using a DVH Registry, E. Sepulveda, C. Freeman, H. Patrick, J. Kildea, AAPM-COMP Virtual Meeting (2020)
6. Poster presentation: The impact of treatment parameter variation on secondary neutron spectra in high-energy radiotherapy with electron beams. F. Mathew, L. Montgomery, G. Al Makdessi, J. Kildea, AAPM-COMP Virtual Meeting (2020)
7. Poster presentation: The use of Artificial Intelligence to improve radiotherapy for patients with bone metastasis, H. Naseri, J. Kildea, International Conference on the use of Computers in Radiation Therapy, Montreal (2019)
8. Oral presentation: L. Montgomery, A. Landry, F. Mathew, J. Kildea, A novel MLEM stopping criterion for unfolding neutron fluence spectra in radiotherapy, International Conference on the use of Computers in Radiation Therapy, Montreal (2019)
9. Oral presentation: C.M. Lund, G. Famulari, L. Montgomery, F. Mathew, J. Kildea, A microdosimetric analysis of the interactions of mono-energetic neutrons with human tissue, International Conference on Monte Carlo Techniques for Medical Applications, Montreal (2019)
10. Poster presentation: Generation of the response matrix of a passive nested neutron spectrometer system for use in radiotherapy environments, International International Conference on Monte Carlo Techniques for Medical Applications, F. Mathew, L. Montgomery, C. Lund, J. Kildea, Montreal (2019)
11. Poster presentation: Effect of the flattening filter on photoneutron production at 10 MV in the Varian TrueBeam, L. Montgomery, M. Evans, L. Liang, R. Maglieri, J. Kildea, Varian Research Partnership Symposium, Chicago (2019)

12. Poster presentation: Design and Development of a Patient Portal Using Stakeholder Co-design, J. Kildea, L. Hendren, T. Hijal, ASCO Quality Conference, Phoenix (2018)
13. Poster presentation: Dosimetric Variables for Chest Wall Pain following Lung Stereotactic Body Radiotherapy, Pembroke, C., Albers, J., Kildea, J., Parker, W., & Faria, S. ESTRO Annual Scientific Meeting, Barcelona (2018)
14. Poster presentation: Opal—The Oncology Portal and Application, J. Kildea, L. Hendren, D. Herrera, A. Joseph, R. Maglieri, T. Hijal, ESTRO 36, Vienna (2017)
15. Oral presentation: Secondary Electrons around Clinical Proton Beams, G. Al Makdessi, C. Vallhagen Dahlgren, J. Dubeau, S. Enger, R. Maglieri, L. Mirzakhanian, S. Witharana, J. Kildea, Neutron and Ion Dosimetry Symposium, Krakow (2017)
16. E-poster presentation: Development and Refinement of the Canadian National System for Incident Reporting in Radiation Treatment (NSIR-RT), J Kildea, C. Angers, B. Liszewski, E. Brown, J. Hunt, M. Milosevic, L. Montgomery, K. Moran, S, Ross, A. Walker, IAEA ICARO-2 Conference, Vienna (2017)
17. Poster presentation: Secondary Electrons from Clinical Proton Beams, G. Al Makdessi, J. Kildea, Annual Conference of the AAPM, Denver (2017)
18. Poster presentation: Predicting waiting times in Radiation Oncology using machine learning, A. Joseph, L. Hendren, T. Hijal, J. Kildea, Proceedings of the 16th IEEE International Conference On Machine Learning And Applications, Cancun (2017)
19. Oral presentation: The Oncology Portal and Application, J. Kildea, L. Hendren, A. Joseph, D. Herrera, and T. Hijal, 18th International Conference on the use of Computers in Radiotherapy, London (2016)
20. Oral presentation: Waiting Room Management for a Busy Cancer Centre, J. Kildea, A. Joseph, and T. Hijal, 18th International Conference on the use of Computers in Radiotherapy, London (2016)
21. Poster presentation: Predicting waiting times in Radiation Oncology using machine learning, A. Joseph, L. Hendren, D. Herrera, M. Gorshkov, R. Maglieri, M. Keshavarz, A. Leung, M. Sawaf, J. Wainberg, T. Hijal, and J. Kildea, 18th International Conference on the use of Computers in Radiotherapy, London (2016)
22. Poster presentation: Incident Reporting and Learning Software using the Canadian National System for Incident Reporting - Radiation Treatment, L. Montgomery, and J. Kildea, 18th International Conference on the use of Computers in Radiotherapy, London (2016)
23. Poster presentation: Automated EHR Auditing in Radiation Oncology and a DVH Registry, J. Kildea, A. Joseph, and C. Freeman, 18th International Conference on the use of Computers in Radiotherapy, London (2016)
24. Poster presentation: DepDocs—A web-based platform for knowledge-sharing and collaboration in Radiation Oncology, A. Joseph, and J. Kildea, 18th International Conference on the use of Computers in Radiotherapy, London (2016)
25. Poster presentation: Document and Appointment Transfer from a Radiation Oncology EMR to a Hospital-wide EMR, J. Kildea, A. Joseph, and T. Hijal, 18th International Conference on the use of Computers in Radiotherapy, London (2016)
26. Poster presentation: Automated Electronic Health Record Auditing, J. Kildea, L. Hendren, A. Joseph, T. Hijal and J. Seuntjens, Varian Research Symposium, Atlanta (2015)
27. Oral presentation: Neutron measurements around the Varian TrueBeam linac, R. Maglieri, L. Liang, M. Evans, A. Licea, J. Dubeau, S. Witharana, F. DeBlois, J. Seuntjens, and J. Kildea, Annual Meeting of the American Association of Physicists in Medicine, Austin (2014)

28. Oral presentation: Database technology in radiation therapy - comprehensive clinical QA, J. Kildea, T. Hijal, W. Parker, J. Seuntjens, International Conference on the use of Computers in Radiotherapy, Melbourne (2013)
29. Poster presentation: Comprehensive Web-Based QA in Radiation Oncology, J. Kildea, M.N. Anjum, M. Evans and W. Parker, COMP-AAPM Joint Scientific Meeting, Vancouver (2011)
30. Poster presentation: A Framework for Comprehensive Electronic QA in Radiation Therapy, J. Kildea, M. Evans and W. Parker, Ninth International Conference on Machine Learning and Applications, Bethesda (2011)

National

31. Oral presentation (session on Real-World Evidence in Oncology): J. Kildea, T. Hijal, A Prototype System for Patient Data Donation to power Real-World Evidence Cancer Research in Quebec, The Canadian Cancer Research Conference, Ottawa (2019)
32. Poster presentation (3rd place poster prize) Patient-Powered Research Using the Multi-Institutional Opal Patient Portal, S. Beard, T. Hiijal, L. Hendren, J. Kildea, Canadian Research Software Conference, Montreal (2019)
33. Oral presentation: M. Evans, L. Montgomery, W. Parker, G. Al Makdessi, C. Pacher, J. Kildea, Cradle-to-grave radiation safety management of neutrons produced by linear accelerators in the radiation oncology department, Canadian Radiation Protection Association conference, Ottawa (2019)
34. Poster presentation: Evaluation of the secondary neutron fluence spectra, during high energy radiation therapy, using a passive Nested Neutron Spectrometer (NNS) with gold activation foil, F. Mathew, L. Montgomery, C. Chilian, J. Kildea, COMP 65th Annual Scientific Meeting, Kelowna (2019)
35. Poster presentation: Neutron activation in the radiotherapy bunker: strategies for managing radiation safety, M. Evans, L. Montgomery, J. Kildea, COMP Annual Scientific Meeting, Kelowna (2019)
36. Oral presentation: An investigation of neutron weighting factors using a Geant4-based microdosimetry pipeline, C.M. Lund, G. Famulari, L. Montgomery, J. Kildea, COMP 65th Annual Scientific Meeting, Kelowna (2019)
37. Oral presentation: Development of a Person-centered Patient Portal Using Stakeholder Codesign, J. Kildea, L. Hendren, T. Hijal, e-Health 2019, Toronto (May 2019)
38. Poster presentation: Feasibility of using Natural Language Processing to extract cancer pain score from clinical notes, H. Naseri, J. Kildea, CARO-COMP Joint ASM, Montreal (2018)
39. Poster presentation: The effect of the flattening filter on photoneutron production at 10 MV in the Varian TrueBeam linac, L. Montgomery, M. Evans, L. Liang, R. Maglieri, J. Kildea, COMP Joint Scientific Meeting, Montreal (2018)
40. Poster presentation: Natural Language Processing for Safer Radiotherapy, Wang, H., Valezquez, E., Kildea, J., CARO-COMP-CAMRT Scientific Meeting, Montreal (2018)
41. Poster presentation: The Effect of the Flattening Filter on the Photoneutron Production at 10 MV in the Varian TrueBeam Linac, Montgomery, L., Evans, M., Heng, L., Kildea, J., CARO-COMP-CAMRT Scientific Meeting, Montreal (2018)
42. Oral presentation: Development of a DVH Registry for Plan Evaluation, Dose Accumulation and Cohort Analysis, Patrick, H., Kildea, J., Souhami, L, Albers J., CARO-COMP-CAMRT Scientific Meeting, Montreal (2018)

43. Oral presentation: Opal—The Oncology Portal and Application, J. Kildea, L. Hendren, T. Hijal, Canadian Cancer Research Conference, *Reviewers' Choice session*, Vancouver (2017)
44. Poster presentation: Opal—The Oncology Portal and Application, J. Kildea, L. Hendren, D. Herrera, A. Joseph, R. Maglieri, T. Hijal, Innovative Approaches to Optimal Cancer Care in Canada Conference, Toronto (2017)
45. Poster presentation: Implementation of an in-house radiotherapy incident learning system, compatible with the Canadian National System for Incident Reporting—Radiation Treatment, L. Montgomery, J. Kildea, Innovative Approaches to Optimal Cancer Care in Canada Conference, Toronto (2017)
46. Poster presentation: Neutron Spectral Measurements around a Scanning Proton Beam, J. Kildea, S. Enger, R. Maglieri, L. Mirzakhanian, C. Vallhagen Dahlgren, J. Dubeau, S. Witharana, Annual Scientific Meeting of the Canadian Organization of Medical Physicists, St John's (2016)
47. Poster presentation: Waiting Room Management for a Busy Cancer Centre, J. Kildea, A. Joseph, and T. Hijal, Annual Scientific Meeting of the Canadian Organization of Medical Physicists, St John's (2016)
48. Poster presentation: Realistic knowledge-based waiting times for radiotherapy patients - addressing the pain of waiting, J. Kildea, L. Hendren, A. Joseph, D. Herrera, M. Gorshkov, M. Keshavarz, A. Leung, M. Sawaf, J. Wainberg and T. Hijal, Accreditation Canada's 5th Annual Quality Conference, Montreal (2016)
49. Oral presentation: A nested neutron spectrometer to measure neutron spectra in radiotherapy, R. Maglieri, A. Licea, J. Seuntjens, and J. Kildea, Annual Scientific Meeting of the Canadian Organization of Medical Physicists, Banff (2014)
50. Poster presentation: Automated pre-, post- and intra- treatment electronic health record auditing, Poster Presentation, A. Joseph and J. Kildea, Annual Scientific Meeting of the Canadian Organization of Medical Physicists, Banff (2014)
51. Poster presentation: A web-based platform for collaborative document management in healthcare; J. Kildea and A. Joseph; Annual Scientific Meeting of the Canadian Organization of Medical Physicists, Banff (2014)
52. Oral presentation: Comprehensive Web-Based QA in Radiation Oncology, J. Kildea, M. Evans, and W. Parker, Annual Scientific Meeting of the Canadian Organization of Medical Physicists, Halifax (2012)
53. Oral presentation: Neutron production around a radiation therapy linac bunker—Monte Carlo simulations and physical measurements, R. Khatchadourian, S. Davis, M. Evans, A. Licea, J. Seuntjens, and J. Kildea, Annual Scientific Meeting of the Canadian Organization of Medical Physicists, Halifax (2012)
54. Poster presentation: Feasibility Study for Open Door Low Energy Treatments Using Maze-Type Bunkers Designed for Dual Energy Linacs, M. Evans, J. Kildea, W. Parker, E. Podgorsak, W. Beckham, Annual Scientific Meeting of the Canadian Organization of Medical Physicists, Ottawa (2010)
55. Poster presentation: Determination of Realistic Workload and Use Factors Using the Varian ARIA Database, J. Kildea, W. Parker, E. Podgorsak, and M. Evans, Annual Scientific Meeting of the Canadian Organization of Medical Physicists, Ottawa (2010)

Provincial

56. Poster presentation: Multi-Institutional Expansion of the Opal Patient Portal Smartphone App, S. Beard, T. Hijal, L. Hendren, J. Kildea, Symposium Oncopole, Montreal (2018)

57. Oral presentation: Incident Reporting and Learning at the McGill University Health Centre, J. Kildea and L. Montgomery, Annual Scientific Workshop of the Association québécoise des physicien(ne)s médicaux cliniques, Montreal (2015)
58. Oral presentation: Radiotherapy Incident Management at the MUHC: Standardizaion, Workflow, and Collaboration, L. Montgomery and J. Kildea, Annual Student Day of the Association québécoise des physicien(ne)s médicaux cliniques, Montreal (2015)