

## Bill Kapralos, BSc (Hons.), MSc, Ph.D

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### EDUCATION

- **Doctor of Philosophy in Computer Science.** *The Sonel Mapping Acoustical Modeling Method.* Department of Engineering and Computer Science, York University. Toronto, Ontario, Canada. September 2006. Supervisor: Dr. Michael Jenkin. Co-supervisor: Dr. Evangelos Milios.
- **Master of Science in Computer Science.** *Eyes 'n Ears: A System for Attentive Teleconferencing.* Department of Engineering and Computer Science, York University. Toronto, Ontario, Canada. April 2001. Supervisor: Dr. Michael Jenkin. Co-supervisor: Dr. Evangelos Milios.
- **Bachelor of Science in Computer Science** (*graduated with honours and first class with distinction*). Department of Engineering and Computer Science, York University. Toronto, Ontario, Canada. May 1999.
- **Electronics Engineering Technician Diploma.** Humber College of Applied Arts and Technology. Etobicoke, Ontario, Canada (two more courses required).
- **Electronics Basics Program** (*graduated with honours*). Humber College of Applied Arts and Technology. Etobicoke, Ontario, Canada. June 1994.

### EMPLOYMENT HISTORY

- **Associate Professor (July 2011 - present); Program Director (July 2015 – June 2016, July 2018 – June 2018).** Software Informatics Research Centre (SIRC), Faculty of Business and Information Technology, Ontario Tech University. Oshawa, Ontario, Canada.
- **Technical Lead (April 2018 – present).** Collaborative Human Immersive Interaction Laboratory (CHISIL), Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada.
- **Assistant Professor (August 2006 – June 2011).** Faculty of Business and Information Technology, *Software Informatics Research Centre*, Oshawa, Ontario, Canada.
- **Honorable Guest Professor (April 2014 – present).** Graduate School of Informatics, Shizuoka University, Hamamatsu, Japan.
- **Adjunct Professor (May 2007 - present).** Faculty of Graduate Studies, Department of Engineering and Computer Science, York University. Toronto, Ontario, Canada.
- **Course Director (Contract Faculty, January 2001 – August 2006).** Department of Engineering and Computer Science, York University. Toronto, Ontario, Canada.
- **Course Director (Contract Faculty, April 2005 – August 2005).** Department of Computer Science, University of Toronto. Toronto, Ontario, Canada.
- **Course Director (Contract Faculty, January 2005 – May 2006).** School of Applied Technology, Humber College of Applied Arts and Technology. Etobicoke, Ontario, Canada.
- **Teaching Assistant (January 1999 – August 2006).** Department of Computer Science and Engineering, York University. Toronto, Ontario, Canada.
- **Research Assistant (May 1996 – April 1999).** Department of Computer Science and Engineering, York University. Toronto, Ontario, Canada.
- **Pinball and Video Game Technician (May 1993 – August 1996).** Seven Star Amusements. Toronto, Ontario, Canada.

**ACADEMIC HONORS AND AWARDS**

- Research Excellence Award, Senior Research Category, Faculty of Business and Information Technology, Ontario Tech University, March, 2020.
- Greek Diaspora Fellowship 2019 (funded by a grant from the Stavros Niarchos Foundation (SNF) to the Institute of International Education (IIE)), to conduct research in Greece. November 2019.
- Australian Government 2018 Endeavour Executive Fellowship to conduct research in Australia.
- At the invitation of the Federal Republic of Germany, I took part in the week-long *Electronic Start-Up: Industry 4.0 in Germany, Country of Innovation, Visitors Programme*, Germany. August 2016.
- Natural Sciences and Engineering Research Council of Canada (NSERC) and Japan Society for the Promotion of Science (JSPS) Fellowship for Research in Japan. May 2014.
- Google Faculty Research Award (co-recipient). July 2010.
- IBM Center for Advanced Studies (CAS) Faculty Award. June 2009.
- Joseph Liu Thesis Award, Engineering and Computer Science, York University. June 2007.
- York University President's Dissertation Scholarship. September 2004 – August 2005.
- Ontario Graduate Scholarships in Science and Technology (OGSST). May 2003 – April 2004.
- Institute for Robotics and Intelligent Systems (IRIS) Student Fellowship. June 2003.
- Gold (first place) poster. 12<sup>th</sup> Annual Canadian Conference on Intelligent Systems, Calgary, Alberta, Canada. May 29 - June 1, 2002.
- Natural Sciences and Engineering Research Council of Canada (NSERC), Post Graduate Scholarship (PGS B). May 2001 – April 2003.
- Ontario Graduate Student Scholarship (OGS). April 2001 (declined in favor of NSERC).
- Joseph Liu Thesis Award, Engineering Computer Science, York University. June 2001.
- Center for Research in Earth and Space Technology, Graduate Student Award. May 2001.
- Center for Research in Earth and Space Technology, Graduate Student Award. October 2001.
- Allen S. Berg Award (in memory of Nancy Waisbord) for consistently demonstrating excellence in Computer Science. Dept. of Computer Science and Engineering. York University. June 1999.
- Natural Sciences and Engineering Research Council of Canada (NSERC), Post Graduate Scholarship (PGS A). May 1999 – April 2001.
- Ontario Graduate Student Scholarship (OGS). April 1999 (declined in favor of NSERC).
- York University Continuing Student Scholarship. September 1998.
- York University Science Undergraduate Research Award. May 1998 – August 1998.
- York University Science Undergraduate Research Award. May 1997 – August 1997.
- York University Continuing Student Scholarship. September 1996.
- York University Continuing Student Scholarship. April 1996.

**RESEARCH****Past and Current Research Grants and Funding (External Funding Sources: Non-UOIT)**

Description	Year	Amount
E. Peisachovich, A. Dubrowski, C. Da Silva, B. Kapralos, D. Sinclair, R. Jokel, L. Appel, D. Mahdieh, and G. Maheux-Pelletier. AREduX augmented reality experience and experiential education medium to teach empathy to healthcare providers and caregivers of persons living with dementia. <i>Social Sciences and Humanities Research Council of Canada (SSHRC), Insight Grants.</i>	Apr 2021 – Mar 2024	\$277,866
C. Da Silva, B. Kapralos, A. Dubrowski, A. Torres, S. Coffey, C. Anyinam, L. Graham, and E. Peisachovich. International educated nurse-centered virtual serious game. <i>eCampus Virtual Learning Strategy,</i>	Mar 2021 – Feb 2022	
B. Kapralos et al. Examining the effect of sound on haptic fidelity perception in virtual environments. <i>2021 Cooperative Research at Research Center of Biomedical Engineering, Research Institute of Electronics (RIE), Shizuoka University, Hamamatsu, Japan.</i>	Mar 2021 – Feb 2022	

Curriculum Vitae

A. Dubrowski, B. Kapralos, and A. Torres. Enhancing educators' experience with a collaborative learning management system (GEN-LMS). <i>Social Sciences and Humanities Research Council of Canada Small Grants Program 2021</i> .	Mar 2021 – Mar 2022	\$6,914.00
L. Robertson, B. Muirehead, and B. Kapralos. Ready, Teacher One. <i>Social Sciences and Humanities Research Council of Canada (SSHRC), Partnership Engage Grants</i> .	Dec 2020 – Nov 2021	\$24,811
A. Dubrowski, B. Kapralos, P. Mutombo, and A. Torres. Using an innovative tool to teach and test cultural competencies to enhance age-friendly communities. <i>Teaching City Grant, City of Oshawa</i> .	Aug 2020 – Jul 2021	\$20,000
B. Kapralos et al. Examining the effect of sound on haptic fidelity perception in virtual environments. <i>2020 Cooperative Research at Research Center of Biomedical Engineering, Research Institute of Electronics (RIE), Shizuoka University, Hamamatsu, Japan</i> .	Jun 2020 – Mar 2021	\$2,200
W. Tavares, F. Alam, C. Matava, B. Kapralos, A. Dubrowski, and R. Brydges. Exploring the validity of virtual clinical performance assessments. <i>The Medical Council of Canada, Research in Clinical Assessment Grant Competition</i> .	Jun 2020 – May 2021	\$37,444
J. Goodwin, M. Williams-Bell, B. Murphy, B. Kapralos, A. Hogue, and C. McGregor. Enriching firefighter training through the development of a novel virtual reality training simulation for personalized, precision skill and resilience training. <i>Natural Sciences and Engineering Research Council of Canada (NSERC), College and Community Social Innovation Fund Grants</i> .	Dec. 2019 – Nov. 2022	\$358,920
W. Sun, M. Lemonde, A. Quevedo, R. Liscano, B. Kapralos, A. Tokuhiro, and E. Bartfay. Advancing reminiscence therapy through virtual reality application to promote social connectedness of persons with dementia. <i>Ontario Shores-Ontario Tech University Joint Call for Proposals in Dementia Care 2019</i> .	Oct 2019 – Dec 2020	\$25,000
C. Da Silva, C. Anyinam, B. Kapralos, E. Peisachovich, R. Gal, S. Coffey, and T. Shute. Person-centered serious games for mental health education. <i>Social Sciences and Humanities Research Council of Canada (SSHRC), Insight Development Grants</i> .	Jun 2019 – May 2021	\$46,144
B. Kapralos et al. Examining the effect of sound on haptic fidelity perception in virtual environments. <i>2019 Cooperative Research at Research Center of Biomedical Engineering, Research Institute of Electronics (RIE), Shizuoka University, Hamamatsu, Japan</i> .	Jun 2019 – Mar 2020	\$2,200
B. Kapralos. Effective immersive environments; multi-modal interactions, and user interface customization. <i>Natural Sciences and Engineering Research Council of Canada (NSERC) Discovery Grant</i> .	Apr 2019 – Mar 2024	\$170,000
B. Kapralos and A. Quevedo. Usability testing of a gamified educational network. <i>Social Sciences and Humanities Research Council of Canada Small Grants Program (UOIT) 2018</i> .	Jun 2018 – Mar 2019	\$2,000
B. Kapralos et al. Examining the effect of sound on haptic fidelity perception in virtual environments. <i>2018 Cooperative Research at Research Center of Biomedical Engineering, Research Institute of Electronics (RIE), Shizuoka University, Hamamatsu, Japan</i> .	Jun 2018 – Mar 2019	\$2,300
B. Pérez, A. J. Uribe Quevedo, N. Jaimes, B. Kapralos, and D. Rojas. Diseño y desarrollo de un prototipo de simulador con realidad virtual para el tratamiento de infarto de miocardio fase I. <i>Universidad Militar Nueva Granada (UMMG), Bogota, Colombia</i> .	Feb 2018 – Jan 2019	\$35,000

Curriculum Vitae

J. Hughes, C. Collins, J. Arcand, M. DiGiuseppe, S. Dogra, A. Hogue, B. Kapralos, R. Kay, J. Laffier, A. Lesage, A. Mamolo, D. Petrarca, N. Wattie, G. Gadanidis, and I. K. Namukasa. There's an app for that: Designing, developing, researching educational apps. <i>Ontario Research Fund (ORF)</i> .	Aug. 2017 – Jul 2022	\$1,175,000
B. Kapralos et al. Examining the effect of sound on haptic fidelity perception in virtual environments. <i>2017 Cooperative Research at Research Center of Biomedical Engineering, Research Institute of Electronics (RIE), Shizuoka University, Hamamatsu, Japan.</i>	Jun 2017 – Mar 2018	\$2,300
A. J. Uribe Quevedo, B. Kapralos, D. Rojas, B. Pérez, and L. Peñuela. Development of a multimodal tool for cardiac auscultation training phase I. <i>Universidad Militar Nueva Granada, Bogota, Colombia.</i>	Feb 2017 – Jan 2018	\$21,000
A. J. Uribe Quevedo, B. Kapralos, D. Rojas, and B. Pérez. Development of a monitoring posture exergame prototype based on occupational health exercises for maintenance workers phase I. <i>Universidad Militar Nueva Granada (UMMG), Bogota, Colombia.</i>	Feb 2017 – Jan 2018	\$21,000
B. Kapralos et al. Cardiac auscultation skills development through medical simulation-based training. <i>2016 Cooperative Research at Research Center of Biomedical Engineering, Research Institute of Electronics (RIE), Shizuoka University, Hamamatsu, Japan.</i>	Jun 2016 – Mar 2017	\$2,600
B. Kapralos et al. Development of a novel tabletop and mobile imaging device based system to facilitate learner-centric education. <i>2015 Cooperative Research Project, Research Institute of Electronics (RIE), Shizuoka University, Hamamatsu, Japan.</i>	Apr 2015 – Mar 2016	\$3,000
A. Whitehead, R. Biddle, S. Chiasson, L. Frankel, A. Girouard, N. Graham, C. Herdman, B. Kapralos, and A. Ramirez. Collaborative learning of usability experiences (CLUE). <i>Natural Sciences and Engineering Research Council of Canada (NSERC) Collaborative Research and Training Experience Program (Industrial Stream).</i>	May 2015 – Apr 2021	1,650,000
S. Dunn, S. Bhatia, O. Bhattacharyya, A. Chan, E. Feuerstein, B. Kapralos, and L. McCarthy. Development and pilot evaluation of an interactive mobile app (M-app) to support decision-making for emergency contraception. <i>Alternative Funding Plans for Academic Health Science Centres, Innovation Fund.</i>	Jan 2015 – Feb 2016	\$13,850
K. Collins, R. Dockwray, and B. Kapralos. Understanding and improving musical user-generated content in video games. <i>Social Sciences and Humanities Research Council of Canada (SSHRC) Insight Grants.</i>	May 2014 – Apr 2018	\$224,820
B. Kapralos. Spatial sound generation and perceptual-based rendering for virtual environments and serious games. <i>Natural Sciences and Engineering Research Council of Canada (NSERC) Discovery Grant.</i>	May 2014 – Apr 2019	\$100,000
B. Kapralos (with industrial partner Spincore Inc.). An engaging vision-based exergame for exercise and rehabilitation. <i>Natural Sciences and Engineering Research Council of Canada (NSERC) Engage Grants.</i>	May 2014 – Nov 2014	\$24,509
B. Kapralos, A. Dubrowski, M. Hogan, N. Randall, L. Brudnoy, K. Collins, A. Sheppard, and F. Haji. A serious game for medical-based cultural competence education and training. <i>Ontario Simulation Network (Sim-One), Simulation Research &amp; Innovation Grant.</i>	May 2014 – Apr 2015	\$24,915
L. Grierson, A. Dubrowski, B. Kapralos, R. Brydges, C. Bernard, and D. Musson. Observational practice and educational networking: extending the simulation-based education beyond the simulation laboratory. <i>Ontario Simulation Network (Sim-One), Simulation Research &amp; Innovation Grant.</i>	Apr 2014 – Mar 2015	\$25,000

Curriculum Vitae

B. Kapralos et al. Collaborative interprofessional education for critical care teams with augmented e-learning environments engaging advanced imaging devices. <i>2014 Cooperative Research Project, Research Institute of Electronics (RIE), Shizuoka University, Hamamatsu, Japan.</i>	Apr 2014- Mar 2015	\$3,200
B. Kapralos et al. Promoting collaborative interprofessional education for pediatric critical care teams with a table-top computer-based virtual e-learning environment. <i>2013 Cooperative Research Project, Research Institute of Electronics (RIE), Shizuoka University, Hamamatsu, Japan.</i>	May 2013- Apr 2014	\$7,000
L. Dempster, E. Lam, K. Burgess, J. Posluns, J. Fiege, A. Hayes, A. Dubrowski, J. Cheung, B. Kapralos, and L. McKay. Communication skills training: An integrated on-line and classroom design using standardized patients and peer role playing. <i>Faculty of Dentistry, University of Toronto, 2013 Deans Endowment Enrichment Fund.</i>	2013	\$10,192
L. Harris, M. Jenkin, R. Allison, L. Wilcox, W. Gage, A. Hogue, B. Kapralos, and J. Campos. Full field vision and spatial orientation. <i>Canada Foundation for Innovation (CFI), Leading Edge Fund (2012).</i>	2012	\$790,891
C. Whitehead, A. Dubrowski, L. McCarthy, H. Carnahan, B. Kapralos, J. Cheung. Assessing the interest, acceptability and usability of social networking to support a primary care patient-centred model for vulnerable older adults. <i>Ontario Health Science Centre (AHSC) Alternative Funding Plan (AFP) Innovation Fund.</i>	Dec 2012 – May 2014	\$30,000
J. Friedlan, A. Hogue, and B. Kapralos. Interactive accounting game and evaluation engine -- Stage 2. <i>Ontario Partnership for Innovation and Commercialization, Proof of Principle Fund Stage 2.</i>	Jul 2012 – Jun 2013	\$25,000
N. Randall, A. Arya, C. Joslin, D. Wershler, J. Carette, C. Milburn, B. Kapralos, K. Collins, C. Dimarco, G. Graffam, M. Hancock, K. Harrigan, F. S. Lian, S. Scott. IMMERSe: The interactive & multi-modal experience research syndicate. <i>Social Sciences and Humanities Research Council of Canada (SSHRC) Partnership Grants.</i>	May 2012 – Apr 2018	\$2,549,960
B. Kapralos et al. Multimodal interactive interfaces for table-top computers in collaborative e-Learning environments. <i>2012 Cooperative Research Project, Research Institute of Electronics (RIE), Shizuoka University, Hamamatsu, Japan.</i>	May 2012 – Apr 2013	\$11,000
A. Hogue, B. Murphy, B. Kapralos. Development of a serious game to promote safer lifting techniques in the fire service. <i>Workplace Safety and Insurance Board Solutions for Workplace Change.</i>	Dec 2011 – Dec 2012	\$29,978
B. Murphy, S. Passmore, A. Hogue, B. Kapralos, J. Triano, S. Mior, T. McLellan, and A. Dubrowski. Serious games to decrease injury in the fire service by training safer movement patterns and decision making skills: Development and piloting. <i>Workers Compensation Board (WCB) of Manitoba, Research and Workplace Innovation Program (RWIP).</i>	May 2012 – May 2014	\$199,167
J. Friedlan, A. Hogue, and B. Kapralos. Interactive accounting game and evaluation engine. <i>Ontario Partnership for Innovation and Commercialization, Proof of Principle Fund.</i>	July 2011	\$10,000
S. Cristancho, B. Kiaii, A. Dubrowski, F. Moussa, and B. Kapralos. Usability testing of virtual and physical simulation resources for training off-pump coronary artery bypass surgery. <i>J. P. Bickell Foundation.</i>	May 2011 – Apr 2012	\$28,820
K. Collins, A. Hogue, B. Kapralos, N. Randall, S. Stacey. Exploring interactivity and immersion with multi-platform games. <i>Social Sciences and Humanities Research Council of Canada (SSHRC), Standard Research Grants.</i>	Apr 2011 – Mar 2014	\$157,650

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B. Kapralos (with industrial partner Enviroquest Inc.). Incidence response serious game. <i>Federal Economic Development Agency for Southern Ontario (FedDev Ontario)</i> .	Apr 2011 – Mar 2012	\$50,000
B. Kapralos, K. Collins, A. Hogue, and M. Green. <i>Interactive games Ontario 3D (iGO3D)</i> . <i>Ontario Centres of Excellence, Industry Academia Collaboration Program Technical Problem Solving (TPS)</i> .	Apr 2011- Oct 2012	\$24,975
Hogue, B. Kapralos, K. Collins, M. Owen, M. Green, R. Allison, W. Stuerzlinger, S. Mataija, and M. Katchabaw. <i>Interactive games Ontario 3D (iGO3D)</i> . <i>Ontario Media Development Corporation, Entertainment &amp; Creative Cluster Partnership Funds</i> .	Apr 2011– Oct 2012	\$260,000
A. Hogue, B. Kapralos, and J. Friedlan. An interactive case-study simulation engine framework for business and accounting education. <i>Ontario Centres of Excellence, Industry Academia Collaboration Program Technical Problem Solving (TPS)</i> .	Oct 2010- Jun 2011	\$25,000
K. Collins, B. Kapralos, A. Hogue, and J-M. Trivi. Experimenting with distributed audio applications on mobile phones. <i>Google Faculty Research Award</i> .	Jul 2010– Jul 2011	\$47,000
A. Hogue, J. Friedlan, and B. Kapralos. Development of an interactive accounting game. <i>Certified General Accountants of Ontario (CGAO)</i> .	Jun 2010– Jun 2011	\$66,500
A. Dubrowski, J. Pirie, B. Kapralos, L. Grierson, and H. Carnahan. Testing the effectiveness of an Internet mediated, video based, educational networking instrument in preparing trainees for simulation-based teaching of fundamental technical skills: A randomized control study. <i>The Royal College of Physicians and Surgeons of Canada</i> .	Apr 2010– Apr 2011	\$23,882
H. Taki, H. Nonaka, J. Vassileva, M. Jenkin, M. Todorova, K. Collins, B. Kapralos, A. Hogue, S. Sakai, H. Inokawa, and K. Kanev. Multimedia interaction interfaces in collaborative e-Learning environments. <i>Cooperative Research Project at Research Institute of Electronics (RIE), Shizuoka University, Japan</i> .	Mar 2010– Mar 2011	\$12,000
C. Conati, J. Jensen, R. Biddle, E. Lank, L. Hughes, A. Antle, B. Kapralos, and R. Wakkary. Digital games for learning and training. A project in the \$23M <i>Networks of Centres of Excellence (NCE) Graphics Animation and New Media Network (GRAND)</i> research project.	Jan 2010– Dec 2015	\$90,000 to B.Kapralos
B. Kapralos, A. Dubrowski, M. Hogan, C. Mallette, A. Hogue, W. Shi, S. Goldsworthy. Development of a virtual learning environment for interprofessional education in critical care. <i>Inukshuk Wireless Content Development Projects</i> .	Nov 2009 – Aug 2011	\$132,727
K. Collins, and B. Kapralos. Sound on smart tables: An pilot study of methods in sonic interaction design. <i>Social Sciences and Humanities Research Council of Canada, Research Development Initiative</i> .	Jul 2009 – Jul 2011	\$37,162
M. Jenkin, L. Harris, R. Herpers, R. Allison, and B. Kapralos. The perception of self-motion in virtual environments. <i>Alexander von Humboldt Foundation (Transcoop Program, Canada-Germany)</i> .	Jul 2009 – Jul 2012	\$54,967 EUR
B. Kapralos. Streaming knowledge, sharing, and advanced interfaces. <i>IBM Center for Advanced Studies (CAS) Faculty Award</i> .	Jun 2009 – Jun 2010	\$10,000
N. Matsuda, T. Hirashima, J. Vassileva, B. Kapralos, K. Collins, M. Yoneya, K. Kanev, and H. Inokawa. Multimedia interaction interfaces in collaborative e-Learning environments. <i>Cooperative Research Project, Research Institute of Electronics, Shizuoka University, Japan</i> .	Mar 2009 – Mar 2010	\$11,962
B. Kapralos, M. Hogan, B. Muirhead, and A. Dubrowski. Interactive community simulation environment for public health curriculums. <i>Social Sciences and Humanities Research Council of Canada (SSHRC) Image, Text, Sound, and Technology (ITST)</i> .	Feb 2009 – Feb 2010	\$47,404

## Curriculum Vitae

A. Dubrowski, M. Barry, H. Carnahan, B. Kapralos, J. MacDonald-Jenkins, D. Rose, O. Safir, and D. Backstein. Effectiveness of an internet mediated, networked learning instrument in simulation based training of clinical tasks. <i>The Network of Excellence in Simulation for Clinical Teaching and Learning, Innovations and Evaluation Projects.</i>	Feb 2009- Feb 2010	\$37,128
B. Kapralos. Computational acoustics for virtual environments. <i>National Science and Engineering Research Council (NSERC) Discovery Grant.</i>	May 2008 – Apr 2013	\$79,500

### Past and Current Research Grants and Funding (Internal (UOIT) Funding Sources)

Description	Year	Amount
B. Kapralos. A gamified educational network to foster collaborative learning. <i>UOIT Teaching Innovation Fund.</i>	Apr 2015 – Mar 2016	\$8,000
M. DiGiuseppe, R. Simpson, and B. Kapralos. A serious game for phlebotomy training. <i>UOIT Teaching Innovation Fund.</i>	Apr 2015 – Mar 2016	\$8,000
L. Nacke, B. Kapralos, and A. Hogue. <i>Tele-Doolio</i> : A gamified online to-do list system for project-based teaching and learning. <i>UOIT Teaching Innovation Fund.</i>	Apr 2013 – Mar 2014	\$7,460
A. Hogue, B. Kapralos, and N. Nacke. Interactive learning objects for linear algebra and physics. <i>UOIT Teaching Innovation Fund.</i>	Apr 2012 – Mar 2013	\$6,993
B. Kapralos, A. Hogue, and W. Shi. WildMagic+: A high-quality industry-standard open-source game engine framework. <i>UOIT Teaching Innovation Fund.</i>	Apr 2009- Mar 2010	\$7,100
Hogue, B. Kapralos, and W. Shi. Generalized framework for interactive learning objects with application to linear algebra and physics. <i>UOIT Teaching Innovation Fund.</i>	Apr 2009- Mar 2010	\$7,100
M. Vargas-Martin, and B. Kapralos. Using sonification to enhance teaching and learning of network intrusion detection. <i>UOIT Teaching Innovation Fund.</i>	Apr 2009- Mar 2010	\$7,100
B. Kapralos, and M. Hogan. Interactive community simulation environment for public health curriculums. <i>UOIT Teaching Innovation Fund.</i>	Apr 2008- Mar 2009	\$7,000
A. Hogue, B. Kapralos, and J. Friedlan. Interactive simulation environment for accounting education. <i>UOIT Teaching Innovation Fund.</i>	Apr 2008- Mar 2009	\$7,000

### **PUBLICATIONS** (Names in bold denote students, underlined names denote post-doctoral fellows)

**Citation Conventions:** I always place students before me in any authored work even if they have not contributed to the writing of the paper. I strictly follow this approach even if I have taken the leading role in writing of the paper. Generally, a publication where my name appears after students denotes work that I have led even if I am not the last author (non-student authors will appear after me).

#### Edited Books

- 1 A. Brooks, S. Branham, B. Kapralos, A. Nakajima, J. Tyerman, and I. Jain (Eds.). *Recent Advances in Technologies for Inclusive Well-Being: Virtual patients, gamification and simulation.* Springer-Verlag, Springer Series: Studies in Computational Intelligence, Springer, Heidelberg, Germany, 541 pages.
- 2 A. Brook, S. Brahnam, B. Kapralos, and L. Jain (Eds.). *Recent Advances in Technologies for Inclusive Well-Being: From Worn to Off-body Sensing, Virtual Worlds, and Games for Serious Applications.* Springer Series: Studies in Computational Intelligence, Springer, Heidelberg, Germany, 2017, 383 pages.

- 3 K. Collins, B. Kapralos, and H. Tessler (Eds.). *The Oxford Handbook of Interactive Audio*. Oxford University Press Inc., New York, NY, USA, 2014, 624 pages.

### Refereed Journal Publications

- 1 **B. Nguyen, A. Torres**, W. Sim, D. Kenny, L. Beavers, D. Campbell, W. Lou, B. Kapralos, E. Peter, A. Dubrowski, S. Krishnan, and V. Bhat. Digital interventions to reduce distress among health care providers at the frontline: Protocol for a feasibility trial. *JMIR Research Protocols* (to appear 2021).
- 2 **M. Mnaymneh**, R. van Oostveen, B. Kapralos, and Adam Dubrowski. Effective collaboration through activity theory and knotworking in clinical settings. *Cureus Journal of Medical Science* (t2021).
- 3 **M. Chan**, A. Uribe-Quevedo, M. Jenkin, B. Kapralos, N. Jaimes, and K. Kanev. Virtual and augmented reality direct ophthalmoscopy tool: A usability, task workload, and task difficulty comparison. *Multimodal Technologies and Interaction*, (to appear 2021).
- 4 M. A. Garcia-Ruiz, B. Kapralos, G. Rebolledo-Mendez. An overview of olfactory displays in education and training. *Multimodal Technologies and Interaction*, (to appear 2021).
- 5 E. H. Peisachovich, A. Dubrowski, C. Da Silva, B. Kapralos, J. E. Klein, and Z. Rahmanov. Using simulation-based methods to support demonstration of competencies required by micro-credential courses. *Cureus Journal of Medical Science*, s 13(8): e16908. doi:10.7759/cureus.16908.
- 6 B. Kapralos. Learning about serious game design and development at the K-12 level. *International Journal of Information and Learning Technology*, 38(3):316-327, 2021.
- 7 **B. Cowan**, B. Kapralos, and K. Collins. Does improved sound rendering increase player performance? A Graph-based spatial sound framework. *IEEE Transactions on Games*, 13(3): 263-274, 2021. doi: 10.1109/TG.2020.3000261. **(2020 IF: 1.851)**
- 8 A. Dubrowski, B. Kapralos, E. Peisachovich, C. Da Silva, and **A. Torres**. A model for an online learning management system for simulation-based acquisition of psychomotor skills in health professions education, *Cureus Journal of Medical Science*, 13(3):e14055, 2021. doi:10.7759/cureus.14055.
- 9 **J. Moo-Young, T. M. Weber**, B. Kapralos, A. Quevedo, and F. Alam. Development of “Unity Simulator for Epidural Insertion Training” (USEIT) for replacing current lumbar puncture simulators, *Cureus Journal of Medical Science*, 13(2):e13409, 2021. doi 10.7759/cureus.13409.
- 10 **H. M. Froome**, C. Towson, S. Rhodes, **B. Franco-Arellano**, A. LeSage, **R. Savaglio, J. Brown, J. Hughes**, B. Kapralos, and J. Arcand. Effectiveness of the Foodbot Factory mobile serious game on increasing nutrition knowledge in children. *Nutrients* 12, 3413, 2020; doi:10.3390/nu12113413. **(2020 IF: 5.717)**
- 11 **K. Wilcocks**, B. Kapralos, A. Uribe-Quevedo, F. Alam, and A. Dubrowski. The anesthesia crisis scenario builder for authoring anesthesia crisis-based simulations. *IEEE Transactions on Games*, 12(4):361-366, 2020. **(2020 IF: 1.851)**
- 12 **J. M. Brown, R. Savaglio, G. Watson**, A. Kaplansky, A. LeSage, J. Hughes, B. Kapralos, and J. Arcand. Optimizing child nutrition education with the Foodbot Factory mobile health app: Formative evaluation and analysis. *Journal of Medical Internet Research (JMIR) Formative Research*, 4(4): 15534, 2020. doi:10.2196/15534 <http://dx.doi.org/10.2196/15534>. **(2020 IF: 5.43)**
- 13 B. Kapralos, A. Uribe-Quevedo, K. Collins, and A. Dubrowski. Intelligent avatars and emotion in medical-based virtual environments. *Intelligent Decision Technologies*, 13(4):407-416, 2020.
- 14 **B. L. Grant**, P. C. Yelder, T. A. Patrick, B. Kapralos, M. Williams-Bell, B. A. Murphy. Audiohaptic feedback enhances motor performance in a low-fidelity simulated drilling task. *Brain Sciences*, Special Issue on *The Role of Body in Brain Plasticity*, 10(1):1-14, 2020. **(2020 IF: 3.394)**
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- 2 B. Kapralos and maxSIMhealth Group. An interconnected collective of manufacturing, design, and simulation labs to advance medical simulation training. In A. L. Brooks, S. Branham, B. Kapralos, A. Nakajima, J. Tyerman, and I. Jain (Eds.). *Recent Advances in Technologies for Inclusive Well-Being: Virtual Patients, Gamification and Simulation*. Springer-Verlag, Intelligent Systems Reference Library, Germany, Ch. 8, pp. 141-176, 2021.
- 3 **S. N. Stahlke**, **J. D. Bellyk**, **O. R. Meier**, P. Mirza-Babaei and B. Kapralos. In A. L. Brooks, S. Branham, B. Kapralos, A. Nakajima, J. Tyerman, and I. Jain (Eds.). *Recent Advances in Technologies for Inclusive Well-Being: Virtual Patients, Gamification and Simulation*. Springer-Verlag, Intelligent Systems Reference Library, Germany (to appear 2021).
- 4 **F. Da Rocha Tomé Filho**, B. Kapralos, and P. Mirza-Babaei. Exploring current board games' accessibility efforts for persons with visual impairment. In A. L. Brooks, S. Branham, B. Kapralos, A. Nakajima, J. Tyerman, and I. Jain (Eds.). *Recent Advances in Technologies for Inclusive Well-Being: Virtual Patients, Gamification and Simulation*. Springer-Verlag, Intelligent Systems Reference Library, Germany (to appear 2021).
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#### Refereed Conference and Workshop Proceedings (Full and Short Papers)

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- 2 **F. Gelsomini**, E. Tomasuolo, M. Roccaforte, P. C. K. Hung, B. Kapralos, A. Dubrowski, A. Quevedo, K. Kanev, M. Hosoda, H. Mimura. Communicating with humans and robots: A motion tracking data glove for enhanced support of deafblind. In *Proceedings of the International Conference on System Sciences (HICSS)*, Hawaii, USA, January 4-7, 2022.
- 3 **Q. Daggett**, B. Kapralos, C. Baker-Barill, T. Burnet-Greene, M. van Zandvoort. Remote testing and evaluation of a serious game for education about vaping. In *Proceedings of the 14th International Conference on Interactive Mobile Communication Technologies and Learning (IMCL 2021)*, November 4-5, 2021, Thessaloniki, Greece.
- 4 **G. Ning, Q. Daggett, A. Perivolaris**, B. Kapralos, A. Quevedo, KC Collins, K. Kanev, and A. Dubrowski. Rethinking audio-haptic perceptual immersion from in-person to remote testing during COVID-19. In *Proceedings of the 14th International Conference on Interactive Mobile Communication Technologies and Learning (IMCL 2021)*, November 4-5, 2021, Thessaloniki, Greece, pp. 1-9.
- 5 **K. Wood**, L. M. P. Calderon, A. Quevedo, B. Kapralos, and S. Perera. Virtual reality and the use of physiological measures: A literature analysis. In *Proceedings of the 23rd Symposium of Virtual and Augmented Reality (SVR 2021)*, virtual conference, October 18-21, pp. 1-10, 2021.
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- 8 **A. Torres**, B. Kapralos, C. Da Silva, E. Hava Peisachovich, and A. Dubrowski. A scenario editor to create and modify virtual simulations and serious games for mental health education. In *Proceedings of the Twelfth International Conference on Information, Intelligence, Systems and Applications (IISA 2021)*, 12-14 July 2021, Crete, Greece, pp. 1-4.
- 9 A. Dubrowski, B. Kapralos, E. Patocskai, **A. Torres, A. Arutiunian, S. Wahab, T. Weber**, and **M. Mnymneh**. Virtual health experiential learning platform (HELP) - utilizing gamified educational networking and three-dimensional printing for distance training. In *Proceedings of The Learner: Twenty-eighth International Conference on Learning*, July 9-11, 2021, Krakow, Poland.

- 10 **S. Matthews, K. Wood**, A. Quevedo, B. Kapralos, A. Dubrowski, N. Jaimes, F. Alam, and D. Rojas. A preliminary eye tracking and HMD orientation comparison to determine focus on a cardiac auscultation training environment. In *Proceedings of the 7th International Conference of the Immersive Learning Research Network (iLRN 2021)*, May 17 – June 10, 2021, Online conference.
- 11 **K. Wilcocks, A. Perivolaris**, B. Kapralos, A. Quevedo, M. Jenkin, K. Kanev, H. Mimura, M. Hosoda, A. Fahad, and A. Dubrowski. A novel data glove for psychomotor-based virtual medical training. In *Proceedings of the IEEE Global Engineering Education Conference (EDUCON 2021)*, April 21-23, 2021, Vienna Austria.
- 12 **F. Gelsomini**, P. C. K, Hung, B. Kapralos, A. Uribe-Quevedo, M. Jenkin, A. Tokuhira, K. Kanev, M. Hosoda, H. Mimura. Specialized CNT-based sensor framework for advanced motion tracking. In *Proceedings of the Hawaii International Conference on System Sciences (HICSS)*, January 5-8, 2021.
- 13 **T. Ortegon-Sarmiento, M. Vargas-Orjuela**, A. Uribe-Quevedo, D. Rojas, B. Kapralos, N. Jaimes, and B. Perez-Gutierrez. Developing stethoscope replicas for cardiac auscultation training: A comparison between virtual reality, mobile, and makerspace. In *Proceedings of the Games and Learning Alliance Conference*, December 9-10, 2020, Online Edition.
- 14 **J. Yang, M. Chan**, A. Uribe-Quevedo, B. Kapralos, N. Jaimes, and A. Dubrowski. Prototyping virtual reality interactions in medical simulation employing speech recognition. In *Proceedings of the Symposium on Virtual and Augmented Reality (SVR)*, November 7-10, 2020, Porto de Galinhas, Brazil.
- 15 C. Cancelliere, A. Dubrowski, B. Kapralos, S. Mior, P. Côté, B. Muirhead, and R. Dubrowski. Tele-Sim MSK for musculoskeletal rehabilitation professionals. In *Proceedings of the 14th International Multi-Conference on Society, Cybernetics and Informatics (IMSCI 2020)*, September 13-16, 2020 – Virtual Conference, pp.139-143.
- 16 **B. Cowan**, B. Kapralos and K. Collins. Realistic auditory artificial intelligence: Spatial sound modelling to provide NPCs with sound perception. In *Proceedings of the 3rd Audio Engineering Society International Conference on Audio for Virtual and Augmented Reality*, August 17-19, 2020, Redmond, WA, USA.
- 17 **M. Chan**, A. Uribe Quevedo, B. Kapralos, N. Jaimes, M. Jenkin and K. Kanev. A preliminary usability comparison of augmented and virtual reality user interactions for direct ophthalmoscopy. In *Proceedings of the 8th IEEE International Conference on Serious Games and Applications for Health (SEGAH) 2020*, August 12-14, Vancouver, Canada.
- 18 B. Perez-Gutierrez, A. Uribe Quevedo and B. Kapralos. A joint international (Colombia-Canada) graduate course on simulation, VR/AR, and serious games. In *Proceedings of the 8th IEEE International Conference on Serious Games and Applications for Health (SEGAH) 2020*, August 12-14, Vancouver, Canada.
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- 20 **T. Gaudi**, B. Kapralos, A. Uribe-Quevedo, G. Hall, and D. Parvinchi. Autism serious game framework (ASGF) for developing games for children with autism. In *Proceedings of the 2019 International Conference on Interactive Mobile Communication, Technologies and Learning*, Oct. 31 – Nov. 1, 2019, Thessaloniki, Greece, pp. 1-10.
- 21 **A. B. B. Torres**, B. Kapralos, A. Uribe-Quevedo, E. Zea, and A. Dubrowski. A gamified educational network for collaborative learning. In *Proceedings of the 2019 International Conference on Interactive Mobile Communication, Technologies and Learning*, Oct. 31 – Nov. 1, 2019, Thessaloniki, Greece, pp. 1-10.
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- 23 **F. da Rocha Tome Filho**, P. Mirza-Babaei, B. Kapralos, and G. Moreira Mendonca Jr. Let's play together: Adaptation guidelines of board games for players with visual impairment. In *Proceedings of the ACM CHI Conference on Human Factors in Computing Systems*, May 4-9, 2019, Glasgow, UK, pp. 1-5, Paper No. 631,
- 24 **D. Acosta**, D. Gu, A. Uribe-Quevedo, K. Kanev, M. Jenkin, B. Kapralos, and N. Jaimes. Mobile e-Training tools for augmented reality eye fundus examination. In *Proceedings of the 12th International Conference on Interactive Mobile and Communication Technologies and Learning*, October 11-12, 2018, Hamilton, Canada, pp. 83-92.
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- 26 **S. Valdivia**, **R. Blanco**, A. J. Uribe-Quevedo, **L. M. P. Calderon**, **D. Rojas**, and B. Kapralos. A spinal column exergame for occupational health purposes. In *Proceedings of the 2017 Games and Learning Alliance (GALA) International Conference*, December 5-7, 2017, Lisbon, Portugal.
- 27 **T. Ortegon**, **M. Vargas**, A. Uribe-Quevedo, B. Perez-Gutierrez, D. Rojas, and B. Kapralos. Development of a 3D printed stethoscope for virtual cardiac auscultation examination training. In *Proceedings of the IEEE NIH 2017 Special Topics Conference on Healthcare Innovations and Point-of-Care Technologies*. November 6-8, 2017, Bethesda, MD, USA.
- 28 **F. Gelsomini**, K. Kanev, P. Hung, B. Kapralos, M. Jenkin, R. Barneva, and M. Vienna. BYOD collaborative kanji learning in tangible augmented reality settings. *16th International Conference on Global Research and Education*, September 25-28, 2017, Iasi, Romania. Appears in *Recent Advances in Technology Research and Education*, Chapter 39, *Springer Lecture Notes in Computer Science*, 2018, pp. 315-325.
- 29 **K. Wilcocks**, **N. Halabi**, **P. Kartick**, **A. Uribe-Quevedo**, C. Chow, and B. Kapralos. A virtual cardiac catheterization laboratory for patient education: The angiogram procedure. In *Proceedings of the 8th IEEE International Conference on Information, Intelligence, Systems and Applications (IISA)*, August 28-30, 2017, Larnaca, Cyprus, pp. 1-4.
- 30 **D. Moreno**, **M. Melaisi**, **S. MacDonald**, **A. Uribe-Quevedo**, B. Kapralos, and M. V. Martin. Examining the effects of sound on a haptic-based virtual drilling scenario with a brain computer interface. In *Proceedings of the 8th IEEE International Conference on Information, Intelligence, Systems and Applications (IISA)*, August 28-30, 2017, Larnaca, Cyprus, pp. 1-4.
- 31 **M. Melaisi**, **M. Nguyen**, **A. Uribe-Quevedo**, and B. Kapralos. The effect of sound on haptic fidelity perception. In *Proceedings of the IEEE Global Engineering Education Conference (EDUCON) 2017*, April 25-28, 2017, Athens, Greece, pp. 709-712.
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64. M. Hogan, and B. Kapralos. Simulations in community health nursing. *2<sup>nd</sup> National Community Health Nurses Conference*. Toronto, Ontario, Canada, May 29-31, 2008.
65. B. Kapralos, and M. Hogan. Serious games: an overview. *2008 Canadian Conference on Medical Education*. Montreal, Quebec, Canada, May 3-7, 2008.
66. M. Hogan, **H. Sabri, S. Khattak**, and B. Kapralos. Interactive simulation for community health education and training. *Health Education Technology Research Unit (HETRU) Official Launch*. Oshawa, Ontario, Canada, April 7 2008.
67. B. Kapralos, M. Jenkin, E. Milios, and J. Tsotsos. Eyes 'n ears sound localization. In *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2001*. Salt Lake City, UT, USA, May 7-11, 2001.
68. B. Kapralos, M. Jenkin, E. Milios, and J. Tsotsos. Eyes 'n ears: A system for attentive teleconferencing. In *Proceedings of the 39<sup>th</sup> Meeting of the Acoustical Society of America*. Atlanta, Georgia USA, May 30-June 3, 2000. Appears in *Journal of the Acoustical Society of America*, 107(5):2790, 2000.

#### **Keynote and Invited Presentations (given by Bill Kapralos; names in bold denote students)**

1. B. Kapralos. Immersive technologies for medical education. *SingHealth MEDSG 200*, Singapore, September 15, 2021 (Virtual). **Invited Presentation**.
2. B. Kapralos. Designing immersive technologies for medical education. BN7101 Serious Games for Health, Department of Biomedical Engineering, National University of Singapore, Singapore, September 14, 2021 (Virtual). **Invited Guest Lecture**.
3. B. Kapralos. Virtual simulation and serious gaming in medical education: Fidelity and multimodal interactions. *Simulation Interoperability Standards Organization (SISO) Exploration of Next Generation Technology Applications to Modeling and Simulation (M&S) (ENGTAM) Standing Study Group*, August 3, 2021 (Virtual). **Invited presentation**.
4. A. Dubrowski, B. Kapralos, D. Campbell, R. Brydges, S. Krishnan, and E. Peter. *Moral Injury and Digital Interventions (MIDI) Symposium Panel*. June 21, 2021 (Virtual). **Invited Panelist**.
5. B. Kapralos. Immersive technology for medical education. *International Community Research on Medical Simulation Webinar Series*. May 27, 2021. **Invited presentation**.

## Curriculum Vitae

6. B. Kapralos. Immersive technologies and medical education. Computer Simulation & Gaming Conference (CSGC), Virtual Conference, April 16, 2021.
7. B. Kapralos. The gamified educational network learning management system to facilitate engaging cooperative remote learning. *KES International COVID-19 Challenge: A Transition to a more Resilient World - International Virtual Summit*, March 29, 2021. **Invited keynote presentation.**
8. B. Kapralos. Immersive technologies for medical education. *Society of Obstetrics and Gynecologists of Canada's Ontario CME*. December 5, 2020. Toronto, Ontario, Canada (virtual). **Invited plenary presentation.**
9. B. Kapralos. Virtual and augmented reality. *Japanese-Canadian Frontiers of Science Symposium*. March 1-4, 2020, Banff, Alberta, Canada. **Invited presentation.**
10. B. Kapralos. Immersive technologies and multimodal interactions in biomedical engineering and augmented medical simulations and training. *The 5th International Symposium toward the Future of Advanced Researches*, March 6, 2019, Shizuoka, Japan.
11. B. Kapralos. Embracing the future of immersive technologies for medical education. *IEEE SMC Victorian Chapter*, October 22, 2018, Waurn Ponds, Australia. **Invited presentation.**
12. B. Kapralos. Serious Games in Higher Ed: A View from the Trenches Panel at the *Serious Play Conference 2018*, July 18, 2018, Buffalo, USA. **Invited panelist.**
13. B. Kapralos. Embracing the future of immersive technologies for medical education. *Serious Play Conference 2018*, July 18, 2018, Buffalo, USA. **Invited presentation.**
14. B. Kapralos. Embracing the future of immersive technologies for medical education. *1st Canadian Realities in Medicine Conference*, April 7-8, 2018, Toronto, Canada. **Invited presentation.**
15. B. Kapralos. Computer 101 – the basics: Introduction to computers and networks, hardware and software, the Internet and the cloud. *2018 Science in the Courtroom: The Web, Nets & Bots – Everything You Need to Know About Emerging Technologies, National Judicial Institute Science Program*, March 14-16, 2018, Toronto, Canada. **Invited presentation.**
16. B. Kapralos. Immersive technologies, serious gaming, and gamification for medical education. *Lakeridge Health Research and Innovation Rounds*, February 28, 2017, Oshawa, Canada. **Invited Presentation.**
17. B. Kapralos. Immersive technologies, serious gaming, and gamification for medical education. *Best Practice in Education Rounds (BPER), Centre for Faculty Development, Li Ka Shing International Healthcare Education Centre, University of Toronto, and St. Michael's Hospital*, Jan. 30, 2018, Toronto, Canada. **Invited presentation.**
18. B. Kapralos. Immersive technologies, gamification and serious games for healthcare education. *2017 Ontario Healthcare Simulation Network (SIM-one) SIM Expo*. Nov. 30 – Dec. 1, 2017, Toronto, Canada. **Invited keynote presentation.**
19. B. Kapralos. Immersive technologies for medical education, health, and well-being. *Entertainment Software Association of Canada (ESAC), Beyond Entertainment Conference*, October 23, 2017, Ottawa, Canada. **Invited presentation.**
20. B. Kapralos. Immersive technologies for medical education. April 20, 2017. School of Computer Science, Lincoln University, Philadelphia, PA, USA. **Invited presentation.**
21. B. Kapralos. Serious gaming and immersive technologies for medical education. *Seminario Internacional - Práctica en Terapia de Aceptación y Compromiso (ACT)*, February, 23, 2017. Universidad Pontificia Bolivariana Bucaramanga, Colombia. **Invited presentation.**
22. B. Kapralos. Serious gaming and immersive technologies for medical education. February, 20, 2017. *Universidad Militar Nueva Granada*, Bogota, Colombia. **Invited presentation.**
23. B. Kapralos. Serious gaming and immersive technologies for medical education. *IEEE International Conference on Interactive Mobile Communication, Technologies and Learning*, San Diego, CA, USA, October, 17-19, 2016. **Invited keynote presentation.**
24. B. Kapralos. Virtual simulation and serious gaming: fidelity and multimodal interactions. 2<sup>nd</sup> Workshop on Engineering in Medical Applications, September 14-15, 2016, Bogota Colombia. **Invited Presentation.**
25. B. Kapralos. Serious games for medical education and training. *Games Institute Brown Bag Seminar Series*, University of Waterloo, Waterloo, Canada, March 24, 2016. **Invited presentation.**

26. B. Kapralos. An overview of game sound. *10th Audiovisual Arts Festival*, Corfu, Greece, May 17, 2016. **Invited (hands-on) tutorial.**
27. B. Kapralos. Video games and serious games: Analytics and big data. Big data across the disciplines: Modernizing the curriculum and enhancing the scholarship. Part of a panel/roundtable discussion at the *Spring Semester Faculty & Staff Professional Development Day Events*, State University of New York (Fredonia) Fredonia. February 5, 2016. **Invited participant.**
28. B. Kapralos. The application of virtual simulation, serious gaming, and virtual reality-based technologies for anatomy education and training. *Department of Anatomy and Cell Biology Weekly Seminar Series*, Schulich School of Medicine and Dentistry, University of Western Ontario, London, Canada, October 2, 2015. **Invited presentation.**
29. B. Kapralos. The influence and importance of sound and music in virtual learning environments. *10 Πανελλήνιο Συνέδριο Καλλιτεχνικής Παιδείας*. Patra, Greece, June 18, 2015. **Invited keynote presentation.**
30. B. Kapralos. Serious gaming and gamification, for medical-based education and training: Overview, existing work, and open problems. *1st Workshop on Engineering in Medical Applications*, Bogota, Colombia, June 5, 2015. **Invited Presentation.**
31. B. Kapralos. Gamification and serious games for health professions education and health care. *GRAND Digital Health / E-Health Forum*, Vancouver, Canada, November 24, 2014. **Invited presentation.**
32. B. Kapralos. Serious games in education and health. Universidad La Araucanana, Santiago, Chile, November 12, 2014. **Invited presentation.**
33. B. Kapralos, and B. Cowan. A “hands-on” introduction to serious games, and (virtual) simulation for health professions education. *3rd Annual Sunnybrook Education Conference: Technology-Enhanced Learning*, Toronto, Canada, October 17, 2014. **Invited presentation.**
34. B. Kapralos. Gaming, gamification, and serious games. Faculty of Engineering, The Nueva Granada Military University, Bogota, Colombia, September 18, 2014. **Invited Presentation.**
35. B. Kapralos. Serious games for medical education. Faculty of Medicine, The Nueva Granada Military University, Bogota, Colombia, September 16, 2014. **Invited Presentation.**
36. B. Kapralos. Serious games for health professions education. *University of Toronto, Educational Information Technology Summer Student Award Program*. St. Michael's Hospital, Toronto, Canada, August 27. **Invited presentation.**
37. B. Kapralos. Serious games and virtual simulations: Customizing the audio-visual interface. *Well-Being, Rehabilitation, and Healthcare: Serious Games, Alternative Realities, and Play Therapy* Parallel Session at the *6<sup>th</sup> International Conference on Virtual, Augmented and Mixed Reality, HCI International 2014*, Crete, Greece, June 22-27, 2014. **Invited paper and presentation.**
38. B. Kapralos. An overview. Presentation given to the AboutKidsHealth group at the Hospital for Sick Children, Toronto, Canada, Tuesday, March 4, 2014. **Invited presentation.**
39. B. Kapralos. Virtual simulation and serious gaming: Audio-visual interactions, perceptual-based rendering, and the implications. *The 16<sup>th</sup> International Conference on Humans and Computers (HC-2013)*, December 17, 2013, Hamamatsu, Japan. **Invited presentation.**
40. **R. Shewaga**, and B. Kapralos. Z-DOC: A serious game for Z-plasty procedure training. *Ontario Simulation Expo 2013*, Toronto, Canada, December 5-6, 2013. **Invited presentation and demo.**
41. B. Kapralos. Game on: Gaming in medical education. *The 2nd Annual Sunnybrook Education Conference: Digital Learning*, Toronto, Canada, October 10, 2013. **Invited presentation.**
42. B. Kapralos. Serious games for health professionals education. *GRAND NCE Workshop: Innovation, Entrepreneurship and Digital Media Jobs Creation*. Edmonton, Canada, August 12, 2013. **Invited presentation.**
43. B. Kapralos. Multi-modal interactions, perceptual-based rendering and the implications for virtual environments and serious games. *2013 International Conference on Multimedia and Human-Computer Interaction (MHCI'13)*, Toronto, Canada, July 18-20, 2013. **Invited keynote presentation.**
44. B. Kapralos. Audio-visual interactions and perceptual-based rendering in virtual environments and games. *Audiovisual Arts Festival 2013: Art and Interculturalism in the Mediterranean*. Corfu, Greece, June 20-30, 2013. **Invited presentation.**

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45. B. Kapralos. Gaming, gamification, and serious games for law education. "Gamifying Your Law Firm" panel, *Third Annual lawTechcamp* Toronto, Canada, June 8, 2013. **Invited presentation/panelist.**
46. B. Kapralos. Serious games and virtual simulation for health education. "Research in Health Education Apps and Technology" panel, *Apps for Health and Education 2013*, Hamilton, Canada, May 16, 2013. **Invited presentation/panelist.**
47. B. Kapralos. Gaming, gamification, and serious games. "Gamification Deep Dive" panel, *Apps for Health and Education 2013*, Hamilton, Canada, May 16, 2013. **Invited presentation/panelist.**
48. **B. Cowan, D. Rojas**, B. Kapralos, K. Collins, and A. Dubrowski. Spatial sound and its effect on visual quality perception and task performance within a virtual environment. *Proceedings of the 21st International Congress on Acoustics*, June 2-7, 2013, Montreal, Canada. **Invited presentation.**
49. B. Kapralos. Game-based learning, serious games, and computer science. *13<sup>th</sup> Conference of the Association for Computer Studies Educators (ACSE) 2012*, Toronto, Ontario, Canada, November 24, 2012. **Invited presentation.**
50. B. Kapralos. Serious games for surgical education and training. *macGRID Simulation Research Network Workshop 2012*. Hamilton, Ontario, Canada, November 7-8, 2012. **Invited presentation.**
51. B. Kapralos. Serious games for surgery education and training. *Symposium on the Advances in Simulation-Based Surgical Education*. Bucaramanga, Colombia, July 27-28, 2012. **Invited presentation.**
52. B. Kapralos, and A. Dubrowski. The use of virtual learning environments to augment and extend simulation-based health professional's education. *Healthcare Simulation Conference and Networking Event: Simulation and Technology for Improved HealthCare and Education*. Toronto, Canada, March 2, 2012. **Invited presentation.**
53. B. Kapralos. iGO3D - exploring 3D gaming technology. *X-Summit*, Toronto, Ontario, Canada, October 24-26, 2011. **Invited presentation.**
54. B. Kapralos. An overview of serious games and game-based learning. *Seminario Internacional de Ingenieria Electronica, Universidad Pontificia Bolivariana–Bucaramanga*. Bucaramanga, Colombia, September 22, 2011. **Invited presentation.**
55. B. Kapralos. The S-3D gaming experience. *16<sup>th</sup> Conference on Animation, Effects, Games and Interactive Media (FMX 2011)*, Stuttgart, Germany, May 3-6, 2011. **Invited presentation.**
56. B. Kapralos. Game-based learning and serious games: Serious opportunities. *Education Technology Strategies for Universities, Colleges, and K-12 Schools*. Toronto, Ontario, Canada, March 2-3, 2011. **Invited presentation.**
57. B. Kapralos. Serious games. *Simulation Institute and Strategic Networking Day*. Toronto, Ontario, Canada, November 19-20, 2010. **Invited presentation.**
58. B. Kapralos. Serious games + computer science. *Association for Computer Studies Educators (ACSE) 2010 Conference*. Toronto, Ontario, Canada, October 30, 2010. **Invited presentation.**
59. B. Kapralos. Serious games for interprofessional education for critical care response teams. *Group Awareness in Online Work, Learning, and Games Workshop at HCI 2010*. Abertay, Dundee, Scotland, September 7, 2010. **Invited keynote speaker.**
60. B. Kapralos. Serious games = serious opportunities. *Seminario Internacional de Ingenieria Electronica, Universidad Pontificia Bolivariana–Bucaramanga*. Bucaramanga, Colombia, April 30, 2010. **Invited presentation.**
61. B. Kapralos, A. Hogue, A. Kopinska, and **S. Khattak**. The interaction of visual and auditory cues to linear self-motion perception. *10th Western Pacific Acoustics Conference. Special Session on Sound Technologies for Multimodal Communication*. Beijing, China. September 21-23, 2009. **Invited presentation.**
62. B. Kapralos. Self-motion perception with changing sound source intensity. *CIRMMT Workshop on Multimodal Influences on Perceived Self-Motion*. Montreal, Quebec, Canada, February 4, 2008. **Invited presentation.**
63. B. Kapralos, M. Jenkin, and E. Milios. Acoustical modeling with sonel mapping. *19<sup>th</sup> International Congress on Acoustics (ICA 2007)*. Madrid, Spain, September 2-7, 2007. **Invited presentation.**

**Other Presentations (Presented by Bill Kapralos)**

1. B. Kapralos. Immersive technologies and serious gaming for medical education and training. *School of Electrical & Computer Engineering, Technical University of Crete*, Chania, Greece, May 30, 2017.
2. B. Kapralos. Serious gaming, virtual simulation, and immersive technologies for history, culture, and archeology education and training. *Guest Lecture: New Technologies for Cultural Heritage* (a core course for all students in History and Archaeology program, 4th year), University of Peloponnese, Kalamata, December 6, 2016.
3. B. Kapralos and **A. Uribe**. Serious gaming for medical education: Overview, multi-modal interactions, and open problems. *N SERC CREATE Collaborative Learning in Usability Experiences (CLUE) Seminar Series*, Carleton University, Ottawa, Canada, April 27, 2016.
4. B. Kapralos. Serious games for surgical education. Department of Computer Science, Ryerson University, Toronto, Canada, October 24, 2013.
5. B. Kapralos. The efficient approximation of acoustical diffraction using the GPU. Electrical and Computing Engineering Department, University of Patras, Greece, October 4, 2012.
6. B. Kapralos. Serious games for knee replacement surgery procedure education and training. *Health Education Technology Research Unit (HETRU) Rounds*. Oshawa, Ontario, Canada, March 11, 2010.
7. **B. Cowan** and B. Kapralos. Real-time spatial sound for virtual environments and games utilizing the GPU. Queens University, Kingston, Ontario, Canada, January 22, 2009.
8. Participant at the Ontario *Video Game Roundtable Meeting* with the Honorable Minister of Economic Development and Trade, Sandra Pupatello. Toronto, Canada, September 10, 2008.
9. M. Hogan and B. Kapralos. Interactive simulation for community health education and training. *Health Education Technology Research Unit (HETRU) Rounds*. Oshawa, Canada, Mar. 13, 2008.

**Miscellaneous Publications and Technical Reports (Non-Refereed)**

1. **F. Hamidi**, and B. Kapralos. A review of spatial sound for virtual environments and games with graphics processing units. *The Open Virtual Reality Journal*, 1(1):8–17, 2009.
2. B. Kapralos, M. Jenkin, and E. Milios. The sonel mapping acoustical modeling method. Department of Computer Science and Engineering, York University, Toronto, Ontario, Canada. *Technical Report. CS-2006-10*, September, 2006.
3. B. Kapralos, D. Zikovitz, M. Jenkin, and L. R. Harris. Auditory cues in the perception of self-motion for linear translation. Department of Computer Science and Engineering, York University, Toronto, Ontario, Canada. *Technical Report. CS-2004-04*, November, 2004.
4. B. Kapralos, M. Jenkin, and E. Milios. Audio-visual localization of multiple speakers in a video teleconferencing setting. Department of Computer Science and Engineering, York University, Toronto, Ontario, Canada. *Technical Report CS-2002-02*, July 2002.

**Published Reviews in ACM Computing Reviews**

1. Completed a summary and a review of the following paper (December 5, 2008): K. Bormann. Visuals are not what they look, *Virtual Reality* 12(2): 115-123, 2008.

**SCHOLARLY AND PROFESSIONAL ACADEMIC ACTIVITIES**

- **Conference Chairing and Organizing Committees**

Name	Dates
<b>Workshop Chair: 2018 International Workshop on Immersive Technologies and Serious Gaming for Health Professions Education</b> – held in conjunction with the <i>IEEE 9th International Conference on Information, Intelligence, Systems and Application</i> .	Jul 23-25, 2018
<b>Conference Co-Chair: IEEE Games, Entertainment, and Media Conference (GEM) 2015</b> . Toronto, Ontario, Canada.	Oct 14-16, 2015
<b>Workshop Chair: 2015 International Workshop on Serious Gaming = Serious Business</b> . Hamamatsu, Japan.	Mar 5, 2015

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<b>Organizing Committee (Virtual Sim/Gaming/Tech. Session):</b> <i>Ontario Simulation network (Sim-One) Simulation Exposition.</i> Toronto, Canada.	Dec 4-5, 2014
<b>Conference Chair:</b> <i>IEEE Games, Entertainment, and Media Conference (GEM) 2014.</i> Toronto, Ontario, Canada.	Oct 22-24, 2014
<b>Workshop Co-Chair:</b> <i>International Workshop on Collaboration and Gaming (CoGames 2013).</i> As part of the <i>2013 IEEE International Conference on Collaboration Technologies and Systems (CTS 2013).</i> San Diego, CA, USA.	May 20-24, 2013
<b>Conference Co-Chair:</b> <i>The 18th ACM Symposium on Virtual Reality Software and Technology.</i> Toronto, Ontario, Canada.	Dec 10-12, 2012
<b>Workshop Chair:</b> <i>10<sup>th</sup> International Conference on Entertainment Computing</i> in 2011. Vancouver, British Columbia, Canada	Oct 5-8, 2011
<b>Conference Chair:</b> <i>ACM FuturePlay @ GDC 2010.</i> Vancouver, British Columbia, Canada.	May 6-7, 2010
<b>Organizing Committee:</b> <i>Health Education Technology Research Unit (HETRU) and McGraw-Hill Ryerson 2nd Annual Conference: What Really Works: Strategies to Improve Teaching and Learning.</i> Oshawa, Canada	Nov 21-22, 2009
<b>Conference Chair:</b> <i>ACM FuturePlay @ GDC 2009.</i> Vancouver, British Columbia, Canada	May 12-13, 2009
<b>Conference Chair:</b> <i>ACM FuturePlay 2008 International Conference on the Future of Game Design and Technology.</i> Toronto, Ontario, Canada	Nov 3-5, 2008
<b>Workshop Organizing Committee:</b> <i>CIRMMT Workshop on Multimodal Influences on Perceived Self-Motion.</i> Montreal, Quebec, Canada	Feb 4, 2008
<b>Conference Chair:</b> <i>ACM FuturePlay 2007 International Conference on the Future of Game Design and Technology.</i> Toronto, Ontario, Canada	Nov 15-17, 2007

• **Panel/Tutorial Participation/Organization**

<b>Name and Description</b>	<b>Dates</b>
F. Lamberti, B. Kapralos, S. Seinfeld, Z. Lv, and A. Cannavo. 3D reconstruction, digital twinning, and simulation for virtual experiences. Workshop at IEEE Conference on Virtual Reality + 3D User Interfaces. Virtual conference.	Mar. 12-13, 2022
B. Kapralos, A. Dubrowski, and F. Haji. An introduction to serious games, and (virtual) simulation for health professions education. Organized and led this tutorial at the <i>Medicine Meets Virtual Reality 2013</i> , San Diego, USA.	Feb 20-23, 2013
E. Stroulia, M. Galetanu, P. Pacholski, K. Lyons, P. Messinger, B. Kapralos, M. Seif El-Nasr, and J. Connolly. Virtual worlds for modeling complex processes between people and systems. Tutorial participant at <i>IBM CASCON 2010</i> , Canada.	Nov 2, 2010
B. Kapralos, J. Tahsiro, M. Hogan, K. Finney, A. Dubrowski. Serious games: video game-based learning for health education and training. Tutorial participant <i>Health Professionals Education (HPE) – Global Best Practices in Simulation 2009.</i> Toronto, Canada	May 21-23, 2009
A. Dubrowski, B. Kapralos, and M. Hogan. Blogs, podcasts and serious games: What should educators know about the learning needs of their students? Tutorial participant <i>Health Professionals Education (HPE) – Global Best Practices in Simulation 2009.</i> Toronto, Canada	May 21-23, 2009
K. Collins and B. Kapralos. Panel: An overview of interactive audio: Where are we currently and where are we heading? Organized and participated in this tutorial <i>Digital Kung-Fu: Interactive Workshop at the Centre for Digital Media.</i> Vancouver, Canada	May 14 2009
A. Dubrowski, J. Tashiro, K. Finney, and B. Kapralos. Games for health education. Organized and led this tutorial <i>FuturePlay @ GDC Canada 2009.</i> Vancouver, Canada	May 12-13, 2009



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K. Collins, B. Kapralos, D. Kerr, and L. Paul. Panel: Game audio education: Adding audio to your game courses, and games to your audio courses. Organized and led this tutorial at <i>FuturePlay @ GDC Canada 2009</i> .	May 12-13, 2009
L. J. Gunter, G. Sinclair, S. Engels, and B. Kapralos. Ontario's got talent. Tutorial participant at <i>GameON Finance</i> . Toronto, Canada	Oct 28-29, 2008

- **IEEE Consumer Technology Society**
  - Vice Chair: Human-Machine Interaction and User Experience (HMI) Technical Committee.
- **Consulting**
  - Ontario Ministry of Economic Development and Trade. Completed two "Technical Due Diligence" reports for two separate *Strategic Jobs and Investment Fund* invited (applications. March 2011, and May 2011).
- **Grant Reviewer**
  - Mitacs Accelerate
  - Greek Diaspora Fellowship Program (GDFFP)
  - Ontario Ministry of Economic Development and Trade, Strategic Jobs, Investment Fund
  - Ontario Centres of Excellence
  - Natural Sciences and Engineering Research Council of Canada (NSERC)
  - United States National Science Foundation\ \ \
- **Journal Guest Editor**
  - F. Bellotti, B. Kapralos, K. Lee, and P. Moren-Ger. *Advances in Human-Computer Interaction, Special Issue on User Assessment in Serious Games and Technology-Enhanced Learning*, 2013.
  - J. Jenson, N. Bojin, and B. Kapralos. *Loading... Special issue: FuturePlay Selected Papers*, Vol 3, No 5 (2009).
- **Journal Reviewer**
  - IEEE Transactions on Games
  - The Cureus Journal of Medical Science
  - IEEE Transactions on Vehicular Technologies
  - IEEE Transactions on Learning
  - IEEE Transactions Human-Machine Systems
  - IEEE Consumer Electronics Magazine
  - International Journal of Medical Informatics
  - Health Informatics Journal
  - Virtual Reality
  - ACM Computers in Entertainment
  - Journal of Ambient Intelligence and Smart Environments
  - Computers in Human Behavior
  - Cognitive Processing
  - Entertainment Computing
  - Computers & Graphics
  - The International Journal of Technology, Knowledge & Society
  - IEEE Transactions on Information Technology in BioMedicine
  - International Journal of Human-Computer Studies
  - IEEE Transactions on Instrumentations and Measurement
  - Ageing International
  - Institution of Engineering and Technology Computer Vision
  - Transactions on Haptics
  - Motor Control

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- ACM Transactions on Applied Perception
- Journal of Autonomous Robots
- International Journal of Computer Games Technology
- Journal of the Acoustical Society of America
- Journal of Image and Vision Computing
- Journal of Sound and Vibration
  
- **Media-Related**
  - Click Magazine. Interview, December 2011, “UOIT: Developing Developers”.
  - Science Media Centre of Canada. Member. March 2011-present.
  - Gadget Girlz TV Series. Interview, Fall 2010.
  
- **Committees**
  - Program Development Advisory Committee (PDAC) for Algoma University’s Bachelor of Computer Games Technology Degree Program. February 2010-August 2010.
  
- **Conference Program Committees and Reviewing (2014 - 2016 only)**

Name and Description	Dates
2016 Ontario Simulation Network (Sim-One), Simulation Expo, Toronto.	Oct 6-7, 2016
2015 Ontario Simulation Network (Sim-One), Simulation Expo, Toronto.	Dec 14-15, 2015
2015 ACM International Conference on Interactive Tabletops and Surfaces, Medeira, Portugal	Nov 15-18, 2015
ACM Audio Mostly 2015, Thessaloniki, Greece.	Oct 7-9, 2015
12th International Conference on Advances in Computer Entertainment and Technology, Iskandar, Malaysia.	Nov 16-19, 2015
7th International Conference on Intelligent Technologies for Interactive Entertainment. Torino, Italy.	Jun 10-12, 2015
The 7th ACM SIGCHI Symposium on Engineering Interactive Computing Systems. Duisburg, Germany.	Jun 23–26, 2015
7th International Conference on Computer Supported Education (CSEDU 2015), Lisbon, Portugal	May 23-25, 2015
ACM CHI 2015, Seoul, South Korea	Apr 18-23, 2015
2014 Ontario Simulation Network (Sim-One), Simulation Expo, Toronto.	Dec 4-5, 2014
IEEE Games, Entertainment, and Media Conference (IEEE GEM 2014), Toronto, Canada (reviewed many papers as conference chair)	Oct 22-24, 2014
Fifth International Conference on Serious Games Development & Applications (SGDA 2014), Berlin, Germany	Oct 9-10, 2014
2014 European Signal Processing Conference (EUSIPCO 2014)	Sep 1-5, 2014
Graphics Interface 2014, Montreal, Canada.	May 7-9, 2014.
The IEEE Symposium on 3D User Interfaces 2014, Minneapolis, USA.	Mar 29-30, 2014

## **Student Supervision**

### **Current Graduate & Post-Doctoral Student Supervision**

Name	Start Date	Thesis Title
Sandy Abdo ( <b>MSc</b> )	Sep. 2021	
Claire Culver ( <b>MSc</b> )	Sep. 2021	
Quinn Daggett ( <b>MSc</b> )	Jan 2021	
Robert Savaglio ( <b>MSc</b> )	Sep 2019	
Kyle Wilcocks ( <b>PhD</b> )	Sep 2019	

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Andrei Bosco Bezerra Torres ( <b>PhD</b> , Ontario Trillium Scholarship recipient)	Sep 2018	
Thomas Gaudi ( <b>PhD</b> )	Jan 2020	

**Past Research Associate Supervision**

Name	Start Date	End Date	Project
Hamed Sabri	Jan 2011	Dec 2012	Serious games and 3D modeling
Derek Fullerton (co-supervisor)	Jul 2010	May 2011	Development of a serious game for accounting education and training

**Past Graduate and Post-Doctoral Student Supervision**

Name	Start Date	End Date	Thesis Title
Guoxuan Ning ( <b>MSc</b> )	Sep 2018	Jan. 2021	Simulating a drilling task using audio, video, and simple kinesthetic Cues
Michael Chan, co-supervisor ( <b>MSc</b> )	Sep 2017	Apr 2020	Development and comparison of augmented and virtual reality interactions for direct ophthalmoscopy
Brent Cowan ( <b>PhD</b> , NSERC CGS, A. Graham Bell Canada Graduate Scholarship recipient)	Sep 2012	Dec 2019	A graph-based real-time spatial sound framework
Thomas Gaudi ( <b>MSc</b> )	Sep 2015	Dec 2019	Serious game framework to allow for the development of serious games for autism treatment
Jonathan Umar-Khitab ( <b>MSc</b> ), co-supervisor	Sep 2017	Dec 2019	Investigation on emotional memories and our perception of them over time
Kyle Wilcocks ( <b>MSc</b> )	May 2017	Aug 2019	Anesthesia Crisis Scenario Builder: The development of an anesthesia crisis scenario builder for virtual reality training
Mirza Beig ( <b>MSc</b> )	Sep 2015	May 2018	Scalable immersive audio for virtual environments
Mohammed Melaisi ( <b>MSc</b> )	Sep 2015	Dec 2018	Multimodal (audio-haptic) interactions
Fredderico Filho ( <b>MSc</b> ) co- supervisor	Jan 2017	Dec 2018	Board Game Accessibility for Persons with Visual Impairment
Robert Shewaga (NSERC PGS Scholarship recipient) ( <b>MSc</b> )	Sep 2015	Jan 2017	A comparison of seated and room-scale virtual reality on medical-based serious games and virtual simulation
Alvaro Uribe Quevedo ( <b>Post- Doctoral Fellow</b> )	Sep 2015	Sep 2016	Serious games for medical education and multimodal interactions
Zain Khan ( <b>MSc</b> )	Jan 2014	Dec. 2015	A serious game for cultural competence education and training.
Mina Tawadrous ( <b>MSc</b> )	Sep 2011	Aug 2013	A serious game for incidence response training.
Brent Cowan ( <b>MSc</b> , NSERC PGS M Scholarship recipient)	Sep 2010	Aug 2012	A serious game for total knee arthroplasty (procedure) education

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David Rojas Gaudron ( <b>MSc</b> )	Sep 2010	Aug 2012	Audio and visual fidelity
Jonathan Lam ( <b>MSc</b> )	Sep 2009	Aug 2012	Auditory interaction techniques for a smart-table computer
Chris Zerebecki ( <b>MSc</b> ) co-supervisor	Sep 2011	Jan 2014	Stereoscopic 3D gaming
Brian Cullen ( <b>Post-Doctoral Fellow</b> ) co-supervisor	May 2011	Jul 2012	Multi-modal stereoscopic 3D

**International Visiting Students (Internships)**

Name	Start Date	End Date	Thesis Title
Saverio Cieneri ( <b>MSc</b> ) Programma Di Mobilita Verso Paesi Extra-UE/NON ERASMUS+ recipient (Italy)	Oct 2018	Feb 2019	Intelligent virtual avatars for virtual simulations
Ana Karen Espinosa Becerra ( <b>Ugrad</b> ), Mitacs Gloalink Research Internship Award (mexico)	May 2018	Aug 2018	Emotion and mood modeling for virtual simulations and serious games
David Acosta Laverde ( <b>Ugrad</b> ) Emerging Leaders in the Americas Program (ELAP) Scholarship recipient (Colombia)	Sep 2017	Jan 2018	Virtual eye fundus and cardiac auscultation training tool development
Luca Micelli ( <b>MSc</b> ) Programma Di Mobilita Verso Paesi Extra-UE/NON ERASMUS+ recipient (Italy)	Sep 2017	Jan 2018	Multimodal interactions
David Leonardo Acosta Laverde ( <b>MSc</b> ) Emerging Leaders in the Americas Program (ELAP) Scholarship recipient (Colombia)	Sep 2017	Jan 2018	Development of a virtual reality-based app for eye fundus examination
Sergio Prada Barrios ( <b>Ugrad</b> ) Emerging Leaders in the Americas Program (ELAP) Scholarship recipient (Colombia)	Sep 2015	Jan 2017	Development of a virtual reality-based app for cardiac auscultation education
Jemar Greaves ( <b>MSc</b> ) Emerging Leaders in the Americas Program (ELAP) Scholarship recipient (Barbados)	Jan 2017	Apr 2017	Development of more believable virtual agents (characters)
Michael Mayers ( <b>MSc</b> ) Emerging Leaders in the Americas Program (ELAP) Scholarship recipient (Barbados)	Jan 2017	Apr 2017	Development of more believable virtual agents (characters)
Shamar Kellman ( <b>MSc</b> ) Emerging Leaders in the Americas Program (ELAP) Scholarship recipient (Barbados)	Jan 2016	May 2016	Development of more believable virtual agents (characters)

**Undergraduate Supervision**

**Current Undergraduate Student Supervision**

Student	Start date	End Date	
Quinn Daggett (NSERC USRA recipient – Summer 2020)	May 2020	Aug 2020	Development of a serious game to teach kids about the dangers of vaping

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Joss-Moo Young (NSERC USRA recipient – Summer 2018)	May 2018	Aug 2018	Development of a virtual haptic-based epidural simulator
Robbie Savaglio (NSERC USRA recipient – Summer 2017)	May 2017	Aug 2017	Development of apps for child-based nutritional education
Graham Watson	May 2018	Current	Development of apps for child-based nutritional education
Joss Moo-Young	May 2018	Aug 2018	Immersive technologies for medical education

**TEACHING**

- **Graduate Courses**
  - CSCI 5550: Auditory Perception and Virtual Audio (Fall 2018), UOIT.
  - CSCI 5550: Topics in Digital Media: Immersive Technologies (Fall 2017), UOIT.
  - CSCI 5530: Serious Game Development (Winter 2012, Fall 2013, 2014, 2015), UOIT.
  - CSCI 5500: Auditory Perception and Virtual Audio (Fall 2010), UOIT.
  - CSE 6002: Directed Reading: Auditory Perception and Virtual Audio (Fall 2008). York University, Department of Engineering and Computer Science.
  
- **Undergraduate Courses (UOIT)**
  - INFR 4400: Special Topics: Immersive Technologies (Fall 2017)
  - INFR 4400: Special Topics: Gamification (Winter 2017)
  - INFR 1100: Introduction to Programming (Fall 2014)
  - INFR 4391: Special Topics: Serious Games and Simulation (Fall 2019, Winter 2012, Fall 2013, Winter 2015, 2016)
  - INFR 4350: Virtual Reality and User Interaction (Fall 2008, 2009, 2010).
  - INFR 2350: Intermediate Computer Graphics (Winter 2007, 2008, 2009, 2010, 2011).
  - INFR 2370: Game Sound (Each Winter semester from 2006 - 2020).
  - INFR 1350: Introduction to Computer Graphics (Fall 2006, 2007, 2008, 2009, 2010).
  - INFR 2810: Computer Architecture (Fall 2020, Fall 2019, 2018, Fall 2007, 2008, 2011, Winter 2014 – 2016).
  
- **Undergraduate Courses (UOIT, Faculty of Education)**
  - AEDT 4120: Serious Gaming and Simulations (Online course; Winter 2013, 2015, 2016).
  
- **Undergraduate Courses (York University, Dept. of Engineering and Computer Science)**
  - CSE 1020: Introduction to Computer Science I (Summer 2006).
  - CSE 1030: Introduction to Computer Science II (Summer 2006).
  - CSE 3301: Programming Language Fundamentals (Summer 2006).
  - CSE 1530: Computer Use II: Programming (Winter 2006).
  - COSC 2011: Fundamentals of Data Structures (Winter 2001).
  
- **Undergraduate Courses (University of Toronto, Dept. of Computer Science)**
  - CSC 320: Introduction to Visual Computing (Summer 2005).
  
- **Undergraduate Courses (Humber College, School of Applied Technology)**
  - ELIC 629: Digital Image Processing (Winter 2005, Fall 2005, Winter 2006).
  - ELIC 413: Introduction to Programming - C Programming (Fall 2005).

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### • “Mini” Courses

- “Serious Gaming and Simulation”: component of the e-Xplorers course (an “intensive introduction on the breadth and depth of using e-simulation and e-blended learning for healthcare education”), *Ontario Simulation Network (SIM-One)*, March 4-22, 2013.
- “Introduction to Sound for Games”. Universidad Pontificia Bolivariana–Bucaramanga, Bucaramanga, Colombia as part of the *Fifth Seminario Internacional de Ingenieria Electronica*. September 19-24, 2011.
- “Introduction to Computer Graphics with OpenGL”. UPB, Bucaramanga, Colombia. Part of the *Fourth Seminario Internacional de Ingenieria Electronica*, April 2010.
- “Introduction to Game Sound”. UPB, Bucaramanga, Colombia. Part of the *Seminario Internacional de Ingenieria Electronica*. April 2010.
- “Broadband Technologies and Multimedia Applications”. Day-long course delivered to managers from Bank of Montreal as part of their Master's Certificate of Information Technology Management (Executive program) delivered by UOIT's Management Development Centre (MDC). April 2007.

## University Service and Administrative Positions

### University Service (UOIT)

Name	Nature of Position	Duration of Position
Third year Review Committee, Faculty of Business and IT	Member	Nov 2018 - present
Hiring Committee, Faculty of Business and IT	Member	Nov 2018 - present
Hiring Committee, Faculty of Business and IT	Member	Nov 2015 – Feb 2016
MBA review committee, Faculty of Business and IT	Member	Oct 2014 – Jun 2015
Faculty representative, 2014 UOIT Undergraduate Research Awards (URA) program	Faculty Rep	Nov 2013 – May 2014
Research Committee, Faculty of Business and IT	Member	Oct 2013 – Jun 2018
Third Year Review Committee, Faculty of Business and IT	Member	Oct 2013
Hiring Committee, Faculty of Education	Member	Nov 2012
Search Committee, Faculty of Business and IT	Member	Nov 2011 – Jun 2012
Graduate Committee, Faculty Business and IT	Member	Jul 2011 – Jun 2012
Executive Committee, Faculty of Business and IT	Member	Jun 2011 – Jun 2012
Search Committee, Faculty of Business and IT	Member	Apr 2011 – Jun 2012
Third Year Review Committee, Faculty of Education	Member	Sep 2011 – Oct 2011
Teaching Award Committee	Member	July 2010
Search Committee, Faculty of Business and IT	Member	Mar 2010 – Apr 2010
Search Committee, Faculty of Criminology, Justice, and Policy Studies	Member	Mar 1 2010 – Dec 2010
UOIT-First Lego League (FLL) Committee	Member	Sep 2009 – Jan 2010
Search Committee, Faculty of Business and IT	Member	Sep 2009 – Jan 2010
UOIT-First Lego League (FLL) Committee	Member	Apr 2009 – Jan 2010
University Life sub-committee, Faculty of Business and Information Technology	Member	August 2009
Faculty of Science, Computing Science Curriculum Review Committee	Member	Sep 2008 - Dec 2008
Graduate Admissions Committee, Faculty of Business and IT	Member	Sep 2008 - Sep 2009
UOIT Staff Award of Excellence Committee	Member	August 2008
UOIT Teaching Innovation Fund Review Committee	Member	March 2008

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MSc, PhD Graduate Program Committee	Member	Jan 2008 – Dec 2008
Search Committee, Faculty of Business and IT	Member	Summer 2007–Winter 2008