

Curriculum Vitae

Kevin C Hewitt, Ph. D
Full Professor

Dalhousie University
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CV Highlights

Focus area	Type	Total
Publications/Patents	Refereed publications	35
	Books and Chapters (downloaded 4087 times)	2
	Published abstracts (refereed)	24
	Proceedings papers (refereed)	4
	Reports	2
	Patents (Pending)	1
	PUBLICATIONS TOTAL	66
	TOTAL CITATIONS (on 34 refereed publications)	815
	# CITATIONS/PUBLICATION	23.97
	H-INDEX	11
Presentations/Media	Invited conference, lectures (research)	38
	Invited conference, lectures (science/other education)	24
	Contributed posters	17
	Contributed oral presentations	28
	Media features/text interviews	27
	TOTAL PRESENTATIONS/MEDIA	134
Honors, recognitions and awards	Awards and honors	19
Grants and contracts	PI/Co-PI (research)	\$1,134,041
	Co-Investigator (research)	\$2,093,098
	PI/Co-PI (outreach)	\$2,122,470
	TOTAL GRANTS AND CONTRACTS	\$5,349,609
Grad/Ugrad supervision	PhD – Supervised/Co-supervised	4
	MSc – Supervised/Co-supervised	4
	BSc – Honors	11
	BSc – Summer research	25
	TOTAL	43
Scholarly/Professional activities	External bodies – elected/appointed	4
	Internal bodies – member	36
	Internal bodies – chair	10
	Peer reviewer – funding agencies	5
	Peer reviewer/referee - journals	31

Education

- Simon Fraser University, Ph.D., Physics, February 2000
Advisor: Prof. John C. Irwin
Dissertation: Atomic Substitution in High Temperature Superconductors: Elucidating the Nature of Raman Spectra Excitations
- University of Toronto, B. Sc., Physics Specialist & Biology Major, June 1992

Positions held

Full professor Dalhousie University, Department of Physics and Atmospheric Science	July 1, 2018 -
Associate Professor Dalhousie University, Department of Physics and Atmospheric Science	July 1, 2006 – June 30, 2018
Adjunct Professor Laurentian University, Department of Physics	Jan.1 2008 –
Visiting Professor UNIVAP – Universidade do Vale do Paraíba, Laboratory of Biomedical Vibrational Spectroscopy	Feb. 1 – April 30, 2012
Visiting Associate Professor Stanford University, Molecular Imaging Program at Stanford (MIPS) and Faculty of Medicine	Oct. 1, 2011 – July 1, 2012
Visiting Scientist British Columbia Cancer Agency, Cancer Imaging	Sept., Dec. 2011
Visiting Professor Simon Fraser University	Jan. 2008 – Aug. 2008
Visiting Professor Addis Ababa University, Addis Ababa, Ethiopia	Apr. 2004
Assistant Professor Dalhousie University, Department of Physics and Atmospheric Science	Sept. 2001 – Jun. 2006
Post-Doctoral Fellow Dalhousie University, Department of Physics and Atmospheric Science	Feb. 2000 – Sept. 2001

Awards & Designations

- Harry Jerome Award for Professional Excellence (2014)
- Nova Scotia Discovery Centre, Science Champion Finalist (2008, 2011, 2012, 2017, 2018)
- NSERC Industrial Research Fellowship (2001) (Declined)
- Youth Community Service Award, SVGAGV (1999)
- Sidney Hogg Memorial Graduate Scholarship (1998)
- Caribbean Educational and Cultural Association Scholarship (1997)
- Graduate Research Engineering and Technology (GREAT) Scholarship (1996)
- Simon Fraser University Graduate Fellowship (1994, 1995, 1996)
- Canon Limited – Sidney Hogg Memorial Graduate Scholarship (1994, 1995, 1996)
- NSERC Undergraduate Student Research Award (1991, 1992)
- University of Toronto, Scarborough College Physics Prize (1990)

Research Activities

Research grants awarded

Exploring multi-institutional links to St. Vincent and the Grenadines Community College – Hewitt, KC, Department of Foreign Affairs and International Trade (Canada), Canada-CARICOM Faculty Leadership (2017-18)	\$3,000
Prototype optical instrument for real-time assessment of liver fat content in human subjects - Hewitt, KC, Alwayn, I and Zeng, H, Springboard Atlantic, Marketing support (2017-18)	\$ 9,750
Accurate and real-time assessment of liver fat Content in human subjects Using a Raman fiber optic probe - Hewitt, KC, Alwayn, I and Zeng, H, Innovacorp, Early Stage Commercialization Fund, Phase 1 (2016-17)	\$32,000
Molecular Holography (2016-2021) KC Hewitt, NSERC, Discovery Grants – Individual	\$110,000
Accurate and real-time assessment of liver fat content in human subjects during surgery using a high throughput Raman fiber optic probe – I. Alwayn, H. Zeng and K. C. Hewitt, Springboard Atlantic, Springboard Innovation Mobilization Program P&L, PoC, MS (2015-2016)	\$30,000
Department of Foreign Affairs, Trade and Development (DFATD) Canada-Brazil Awards – Joint Research Projects (2013-2015)	\$31,500
Photodynamic therapy associated with functionalized nanoparticles for breast cancer treatment L. Raniero, P. Favero, J. Ferreira, A. Martin and K. C. Hewitt, CNPq – Brazil, Science without Borders (2012-15)	\$209,961
Imaging Breast Cancer using SERS (2012) A. Martin and K. C. Hewitt, FAPESP Brazil, Visiting Researcher Grant	\$14,503
Enhanced imaging and photothermal therapy of cancers overexpressing EGFR (2010-11) K. C. Hewitt, Nova Scotia Health Research Foundation DI Grant	\$15,000
High Pressure cell for Physical Property determination (2008-09) M. A. White, S. Bonev and K. C. Hewitt, NSERC Equipment Grant	\$76,243
Spectroscopic Detection of Cancerous tissue (2007-2008) K. C. Hewitt, Nova Scotia Economic Development – Student Employment Program	\$ 7,518
Application of a novel composition spread approach to densely map the electronic properties in the phase diagram of cuprate superconductors (2005-2010) K. C. Hewitt, NSERC, Discovery Grants – Individual	\$125,000
Expansion of the centre for excellence in Materials Discovery (2006-2008) J. R. Dahn, I. Hill and K. C. Hewitt, CFI Leading Edge Fund	\$1,028,560
Centre for Excellence in Materials Discovery (2004-2005) JR Dahn, R Dunlap, M Gharghour, KC Hewitt & MA White CFI & Nova Scotia Research and Innovation Trust	\$599, 000
Low-energy, high spatial resolution Raman spectroscopy (2003-10)	\$ 42, 631

K. C. Hewitt, CFI Infrastructure Operating Fund		
Low-energy high spatial resolution Raman spectroscopy (2003) KC Hewitt, CFI & Nova Scotia Research and Innovation Trust, New Opportunities Fund		\$400, 486
Raman scattering, Superconductivity and CMS (2002-2005) KC Hewitt, NSERC, Research Grants – Individual		\$ 96, 000
Lasers, Optical Cryostats and CCD detector (2002) KC Hewitt, NSERC, Equipment Grant		\$156, 656
Raman scattering and superconductivity (2001) KC Hewitt, Dalhousie University, Start-up funds		\$90, 000
Combinatorial Materials Science Equipment (2002) JR Dahn and KC Hewitt, NSERC, Major Installation		\$136, 831
Total funding – all	(2001-)	\$3, 227, 139
Total funding - KC Hewitt - PI	(2001-)	\$1, 134, 041

Refereed Publications

1. T. K. Karakach, *A. B. Tikhomirov, J. E. MacLean, H. Zeng, I. P. Alwayn and K. C. Hewitt. Multivariate Calibration of the Triglyceride Content in Steatotic Livers using Raman spectroscopy. Submitted to *Analyst*, June 5, (2018) [Journal IF **3.864**]
2. T. Bhattacharjee, *M. L. Castilho; I. Oliveira, V. Jesus; K. C. Hewitt and L. Raniero. FTIR study of secondary structure changes in Epidermal Growth Factor by gold nanoparticle conjugation. *Biochimica et Biophysica Acta (BBA) – General Subjects* **1862** (3), 495-500 (2018) [Journal IF **3.666**]
3. *C. L. D. Lee and K. C. Hewitt, First Demonstration of Surface Enhanced - Stimulated Raman Spectroscopy (SE-SRS) using low-power CW sources. *Faraday Discuss.* **205**, 227-232 (2017) [Journal IF **3.858**]
4. Aizpurua, J ; Arnolds, H ; Baumberg, J ; Bruzas, I ; Chikkaraddy, R ; Chisanga, M ; Dawson, P ; Deckert, V ; Delfino, I ; de Nijs, B ; Di Martino, G ; Edel, J ; Fleming, H ; Gawinkowski, S ; Giorgis, F ; Goodacre, R ; Graham, D ; Hardy, M ; Heck, C ; Heeg, S ; Hewitt, K ; Jamieson, L ; Keeler, A ; Krolikowska, A ; Kuttner, C ; Lidgi-Guigui, N ; Lightner, C ; Lombardi, J ; Mahajan, S ; Sabanes, NM ; Masson, JF ; Mueller, NS ; Muhamadali, H ; Murakoshi, K ; Popp, J ; Porter, M ; Reich, S ; Schatz, G ; Tian, ZQ ; Tripathi, A ; Van Duyne, R ; Wang, XP ; Wark, A ; Willets, K ; Willner, M. Ultrasensitive and towards single molecule SERS: general discussion. *Faraday Discuss.* **205**, 291-330 (2017) [Journal IF **3.858**]
5. L. Vieira, *M. L. Castilho, I. Ferreira, J. Ferreira-Strixino, K. C. Hewitt and L. Raniero. Synthesis and characterization of gold nanostructured Chorin e6 for Photodynamic Therapy. *Photodiagnosis and Photodynamic Therapy* **18**, 6-11 (2017) [Journal IF **2.263**]
6. *M. L. Castilho, K. C. Hewitt and L. Raniero. FT-IR characterization of a theranostic nanoprobe for photodynamic therapy and Epidermal Growth Factor Receptor targets. *Sensors & Actuators: B. Chemical* **240**, 903-908 (2017) [Journal IF **4.758**]
7. *C. L. D. Lee, *S. A. Fashir, *M. L. Castilho, *M. A. Hupman, L. J. Raniero, I. Alwayn and K. C. Hewitt. EGFR-specific nanoprobe biodistribution in mouse models. *Journal of Pharmaceutical Sciences* **105**, 25-30 (2016) [Journal IF **2.59**]
8. K. C. Hewitt, *J. G. Rad, H. C. McGregor, E. Browsers, H. Sapp, M. Short, *S. B. Fashir, H. Zeng and I. P. Alwayn. Accurate assessment of liver steatosis in animal models using a high throughput Raman fiber optic probe. *Analyst* **140**, 6602 - 6609 (2015) [Journal IF **4.107**]
9. *L. J. Lucas, C. A. Tellez, *M. L. Castilho, *C. L. D. Lee, *M. A. Hupman, L. S. Vieira, I. Ferreira, L. Raniero, K. C. Hewitt. Development of a sensitive, stable and EGFR-specific molecular imaging agent for surface enhanced Raman spectroscopy. *Journal of Raman Spectroscopy* **46**, 434-446 (2015) [Journal IF **3.137**]

10. *L. J. Lucas , X. K. Chen , *A. J. Smith , M. Korbelik , H. Zeng , P. W. K. Lee and K. C. Hewitt. Aggregation of nanoparticles in endosomes and lysosomes produce Surface Enhanced Raman Spectroscopy. *Journal of Nanophotonics* **9**, 093094-1-14 (2015) [Journal IF **1.488**]
11. *L. Lucas and K. C. Hewitt. Nanobiophotonics for molecular imaging of cancer: Au- and Ag-based Epidermal Growth Factor receptor (EGFR) specific nanoprobos. *Proc. SPIE* **8234**, 82340C-1-15 (2012)
12. C. Gullekson, *L. Lucas, K. C. Hewitt and L. Kreplak. Surface-sensitive Raman spectroscopy of collagen I fibrils. *Biophysical Journal*. **100** (7), 1837-1845 (2011) [Journal IF **3.972**]
13. M. Azzouz, K. C. Hewitt and H. Saadaoui. Dichotomy and pseudogap signature in the Raman response of high-T_c cuprates. *Phys. Rev. B* **81**, 174502-1-4 (2010) [Journal IF **3.718**]
14. M. Saadat, A. E. George and K. C. Hewitt. Densely mapping the phase diagram of cuprate superconductors using a spatial composition spread approach. *Physica C – Superconductivity and Applications* **470**, 559-561 (2010). [Journal IF **0.835**]
15. *L. Lucas, X. K. Chen, *A. Smith, M. Korbelik, H. Zeng, P. W. K. Lee and K. C. Hewitt. Imaging EGFR distribution using surface-enhanced Raman spectroscopy. *Proc. SPIE* **7192**, 719206 (2009).
16. J. Li, L. Christensen, M.N. Obrovac, K.C. Hewitt and J.R. Dahn. Effect of heat treatment on Si electrodes using polyvinylidene fluoride binder. *J. Electrochem. Soc.* **155**, A234-A238 (2008). [Journal IF **3.266**]
17. *R. J. Sanderson and K. C. Hewitt. Magnetron sputter deposition of a 48-member cuprate superconductor library: Bi₂Sr₂Ca_{1-x}Y_xCu₂O_y (0.5 ≤ x ≤ 1) linearly varying in steps of Δx = 0.01. *Appl. Surf. Sci.* **254**, 760-764 (2007). [Journal IF **3.150**]
18. K. C. Hewitt. Nano-Raman spectroscopy: Instrument Design and Techniques. *Physics in Canada* **62** 49-54 (2006). [Journal IF **0.964**]
19. K. C. Hewitt, *P. A. Casey, R. Sun, M. A. White and *R. J. Sanderson. High throughput resistivity apparatus for thin film combinatorial libraries. *Rev. Sci. Instr.* **76**, 093906 (2005). [Journal IF **1.336**]
20. *R. J. Sanderson and K. C. Hewitt. Stoichiometry control of magnetron sputtered Bi₂Sr₂Ca_{1-x}Y_xCu₂O_y (0 ≤ x ≤ 0.5) thin film, composition spread libraries: Substrate bias and gas density factors. *Physica C – Superconductivity* **425**, 52-61 (2005). [Journal IF **0.835**]
21. K. C. Hewitt, X. K. Chen, C. Roch, J. Chrzanowski, J. C. Irwin, E. H. Altendorf, R. Liang, D. Bonn and W. N. Hardy. Hole concentration and phonon renormalization in Ca-doped YBa₂Cu₃O_y (6.75 < y < 7.0). *Physical Review B* **69**, 064514 (2004). [Selected for the March 1, 2004 issue of the *Virtual Journal of Applications of Superconductivity*.] [Journal IF **3.718**]
22. A. Bonakdarpour, K. C. Hewitt, R. L. Turner and J. R. Dahn. Electrochemical and In Situ XRD Studies of the Li Reaction with combinatorially sputtered Mo_{1-x}Sn_x (0 < x < 0.5) thin films. *J. Electrochem. Soc.* **151**, A470-A483 (2004). [Journal IF **3.266**]
23. A. Bonkarpour, K. C. Hewitt, T. D. Hatchard, M. D. Fleischauer and J. R. Dahn. Combinatorial Synthesis and rapid characterization of Mo_{1-x}Sn_x (0 < x < 1) thin films. *Thin Solid Films* **440**, 11-18 (2003). [Journal IF **1.867**]
24. S. D. Beattie, T. Hatchard, A. Bonakdarpour, K. C. Hewitt and J. R. Dahn. Anomalous, High-Voltage Irreversible Capacity in Tin Electrodes for Lithium Batteries. *Journal of the Electrochemical Society* **150**, A701-A705 (2003). [Journal IF **3.266**]
25. L. Y. Beaulieu, K. C. Hewitt, R. L. Turner, A. Bonakdarpour, A. A. Abdo, L. Christensen, K. W. Eberman, L. J. Krause and J. R. Dahn. The electrochemical reaction of Li with amorphous Si-Sn alloys. *Journal of the Electrochemical Society* **150**, A149-A156 (2003). [Journal IF **3.266**]
26. J. R. Dahn, S. Trussler, T. D. Hatchard, A. Bonakdarpour, J. R. Mueller-Neuhaus, K. C. Hewitt and M. Fleischauer. Economical Sputtering System to Produce Large-Size Composition-Spread Libraries having Linear and Orthogonal Stoichiometry Variations. *Chemistry of Materials*. **14**, 3519 (2002). [Journal IF **9.407**]
27. K. C. Hewitt and J. C. Irwin. Doping dependence of the Superconducting gap in Bi₂Sr₂CaCu₂O_{8+δ}. *Phys. Rev. B* **66**, 054516 (2002). [Selected for the August 15, 2002 issue of the *Virtual Journal of Applications of Superconductivity*.] [Journal IF **3.718**]
28. K. C. Hewitt, L. Y. Beaulieu and J. R. Dahn. InSb as a Li insertion host: Problems & Prospects. *Journal of the Electrochemical Society* **148**, A402 (2001). [Journal IF **3.266**]
29. J. G. Naeini, K. C. Hewitt, J. C. Irwin, T. Sasagawa, Y. Togawa, K. Kishio. Temperature induced normal state redistribution of B_{1g} spectral weight in underdoped La_{2-x}Sr_xCuO₄. *Physica C* **341**, 907-908 (2000). [Journal IF **0.835**]
30. C. Boulesteix, K. C. Hewitt and J. C. Irwin. Temperature-induced frequency shift of the Raman-actve CuO₂ planar oxygen vibrational modes of Bi-2212 related to a change of the Cu-O bonding. *Journal of Physics: Condensed Matter* **12**, 9637-9643 (2000). [Journal IF **2.209**]

31. K. C. Hewitt, N. L. Wang, J. C. Irwin, D. M. Pooke, A. E. Pantoja and H. J. Trodahl. Isotope shift of the 590 cm⁻¹ feature in underdoped Bi₂Sr₂CaCu₂O_{8+δ}. *Physical Review B* **60**, R9943 (1999). [Journal IF **3.718**]
32. J. G. Naeini, X. K. Chen, K. C. Hewitt, J. C. Irwin, T. P. Devereaux, M. Okuya, T. Kimura and K. Kishio. Evidence for Magnetic pseudoscaling in overdoped La_{2-x}Sr_xCuO₄ *Physical Review B* **57**, R11077 (1998) [Journal IF **3.718**]
33. K. C. Hewitt, T. P. Devereaux, X. K. Chen, X-Z. Wang, J. G. Naeini, A. Martin and J. C. Irwin. Comment on "Superconducting Gap Anisotropy vs. Doping level in High-Tc cuprates" *Physical Review Letters* **78**, 4891 (1997). [Journal IF **7.645**]
34. X. K. Chen, J. G. Naeini, K. C. Hewitt, J. C. Irwin, R. Liang and W. N. Hardy. Electronic Raman scattering in underdoped YBa₂Cu₃O_{6.5}. *Physical Review B* **56**, R513-R 516 (1997) [Journal IF **3.718**]
35. A. Martin, J. A. Sanjuro, K. C. Hewitt, X-Z Wang, J. C. Irwin and M. J. G. Lee. Phonon self-energy effects due to superconductivity in Bi₂Sr₂CaCu₂O_{8+δ}. *Physical Review B* **56**, 8426 (1997). [Journal IF **3.718**]
36. K. C. Hewitt, X. K. Chen, X. Meng-Burany, A. E. Curzon and J. C. Irwin. Raman investigation of Pb-substituted Bi₂Sr₂CuO_{6+δ}. *Physica C - Superconductivity* **251**, 192-204 (1994). [Journal IF **0.835**]
37. K. C. Hewitt, A. Martin, Y. H. Shi and M. J. G. Lee. Effects of Pb doping on the Raman spectrum of Bi₂Sr₂CuO_{6+δ}. *Physica C - Superconductivity* **216**, 463-470 (1993). [Journal IF **0.835**]

Intellectual property

1. Provisional patent Application No: 62180556 "Detection of steatosis" filed on June 16, 2015
2. International (PCT) Patent Application
 Serial No.: PCT/CA2016/050699
 Filing Date: June 16, 2016
 Title: METHODS OF DETECTION OF STEATOSIS
 Inventor(s): Ian Alwayn, Kevin Cecil Hewitt, Haishan Zeng (equally)
 Priority Date: June 16, 2015

Book chapters

1. Kevin C. Hewitt, *Robert J. Sanderson and *Mehran Saadat (2011). Preparation of Existing and Novel Superconductors using a Spatial Composition Spread approach. In *Applications of High-Tc Superconductivity*, Adir M. Luiz. (Ed.), ISBN 978-953-307-308-8. In Tech. Available from: <http://www.intechopen.com/articles/show/title/preparation-of-existing-and-novel-superconductors-using-a-spatial-composition-spread-approach>.
2. K. C. Hewitt, X. K. Chen, C. Roch, E. H. Altendorf and J. C. Irwin (2002). Doping dependence of Phonon renormalization in YBa₂Cu₃O_y. pg. 237-244. In *Advances in Science and Technology* Vol 38 - Science and Engineering of HTC Superconductivity IV, P. Vincenzini and S. Cerasara (Ed).

Reports

1. A. Bombay and K. C. Hewitt (2015). A Report from the Committee on Aboriginal and Black/African Canadian Student Access and Retention: A Focus on Financial support. 99 pages. Dalhousie University
2. Physics and Atmospheric Science Graduate Program self-study (2014) 57 pages. Dalhousie University

Invited Talks & Presentations – Research Related

1. Canadian Association of Physics Conference, "First Demonstration of CW Stimulated Surface Enhanced Raman Spectroscopy" Halifax, NS Canada. June 12, (2018)
2. V Brazilian Raman Spectroscopy Conference. "First Demonstration of CW Stimulated Surface Enhanced Raman Spectroscopy" Campos do Jordão, Sao Paulo, Brazil. Dec 5, (2017)
3. University of Campinas (UNICAMP) "Molecular Imaging of Cancer Biomarkers" Campinas, Brazil, May 29 (2015)
4. International Conference on Analytical Sciences and Spectroscopy. "EGFR-specific nanoprobe biodistribution in mouse models", Halifax, NS, May 19, (2015)
5. DUPS Lecture series. "Engineering nanoparticles for cancer imaging and treatment" Halifax, NS, Feb. 27, (2015)
6. Atlantic Undergraduate Physics Conference. "Molecular Imaging for early cancer detection" Halifax, NS, Feb. 1 (2014)

7. Center for lasers and applications, University of São Paulo. "Nanobiophotonics for molecular imaging of cancer markers: Development of Epidermal Growth Factor Receptor (EGFR) Specific Nanoprobes for Surface Enhanced Raman Spectroscopy (SERS)" São Paulo, Brazil, Aug. 15 (2013)
8. Workshop Nanociencia e nanotecnologica, desafios para O seculo XXI (Workshop on Nanoscience and nanotechnology, challenges for the XXI century). "Nanobiophotonics for molecular imaging of cancer markers: Development of Epidermal Growth Factor Receptor (EGFR) Specific Nanoprobes for Surface Enhanced Raman Spectroscopy (SERS)" Sao Jose dos Campos, Brazil, June 27 (2013)
9. Universidade do Vale do Paraíba. "Nanobiophotonics for molecular imaging of cancer markers: Development of Epidermal Growth Factor Receptor (EGFR) Specific Nanoprobes for Surface Enhanced Raman Spectroscopy (SERS)" Sao Jose dos Campos, Brazil, June 25 (2013)
10. Dalhousie University. "Molecular Imaging for early detection of cancer" Halifax, NS Feb. 7 (2013)
11. University of Prince Edward Island. "Nanobiophotonics for Molecular Imaging of Cancer Markers." Charlottetown, PEI Dec. 17 (2012)
12. Dalhousie University. James Robinson Johnson Speaker Series. "Molecular Imaging of cancer" Halifax, NS Dec. 6 (2012)
13. St. Francis Xavier University. "Nanobiophotonics for Raman molecular imaging of cancer markers." Antigonish, NS. Oct. 16 (2012)
14. ASPIRE (Applied Science in Photonics and and Innovative Research in Engineering) Conference. Nanobiophotonics for Molecular Imaging of Cancer Markers. Halifax, NS Oct. 11 (2012)
15. Mount Allison University. "Nanobiophotonics for molecular imaging of cancer markers." Sackville, NB. Nov. 16 (2011)
16. Vancouver Island Cancer Clinic. "Spectroscopy of Cancer Cell Markers: Imaging EGFR Distribution and Tracking Thermal Effects Using SERS" Victoria, BC Apr. 19, (2010)
17. University of Victoria. "Plasmonics for spectroscopic imaging of cancer markers" Victoria, BC Apr. 20 (2010)
18. Dalhousie University. "The application of enhanced Raman Spectroscopy to problems in biology, chemistry and physics" Halifax, NS Oct. 23 (2009)
19. University of New Brunswick. "Imaging cancer using Surface Enhanced Raman Spectroscopy." Fredericton, NB. Sept. 18 (2009)
20. Winston Salem State University. "Imaging EGFR Distribution using Surface-Enhanced Raman Spectroscopy." Winston-Salem, NC USA, Jan. 23 (2009)
21. Center of Excellence for the Elimination of Health Disparities. "Imaging EGFR Distribution using Surface-Enhanced Raman Spectroscopy." Winston-Salem, NC USA, Jan 23 (2009)
22. Vanderbilt University. "Imaging EGFR Distribution using Surface-Enhanced Raman Spectroscopy. Nashville, TN USA Jan. 21 (2009)
23. Dalhousie University. "Imaging EGFR Distribution using Surface-Enhanced Raman Spectroscopy. Halifax, NS Canada Nov. 13 (2008)
24. St. Francis Xavier University "Imaging EGFR Distribution using Surface-Enhanced Raman Spectroscopy." Antigonish, NS Canada Nov. 7 (2008)
25. SPEC 2008 - Shedding Light on Disease: Optical Diagnosis for the New Millennium. "Imaging EGFR Distribution using Surface-Enhanced Raman Spectroscopy." San Jose Dos Campos, Sao Paulo, Brazil Oct. 29 (2008)
26. Simon Fraser University. "Densely mapping phase space to elucidate the mechanism of superconductivity", Burnaby, BC, Mar. 5, (2008)
27. East China Normal University. "Raman spectroscopy near metallic nanostructures: Applying SERS & TERS to blood disorders." Shanghai, China, Aug. 28 (2006).
28. Canadian Association of Physicists Annual Congress. "NanoRaman spectroscopy: Instrument design and techniques." St. Catherines, ON, June 12 (2006).
29. Dalhousie University. "Applying combinatorial methods to superconductivity." January 27 (2005).
30. St. Mary's University. "Applying combinatorial methods to superconductivity". January 11 (2005)
31. Acadia University. "Applying combinatorial methods to superconductivity." November 25 (2004).
32. Addis Ababa University. "Application of Raman spectroscopy to problems in biology and physics" Addis Ababa, Ethiopia. April 29 (2004).
33. Gordon Research Conference on Combinatorial Materials Science. "Exploring the phase diagram of high temperature superconductors using a combinatorial materials science approach." Bulleton, CA. January 25-30, 2004 (Declined invitation).

34. University of Prince Edward Island, "Exploring the phase diagram of high temperature superconductors using a combinatorial materials science approach", Nov. 21 (2003).
35. Mount Allison University, "Exploring the phase diagram of high temperature superconductors using a combinatorial materials science approach", Nov. 20 (2003).
36. St. Francis Xavier University, "Raman spectroscopy and Superconductivity: Have'nt we solved the problem yet? How Raman spectroscopy is used to elucidate the nature of superconductivity in the cuprates", Mar. 28 (2003).
37. Laurentian University, "Have'nt we solved the problem yet? How Raman spectroscopy is used to elucidate the nature of superconductivity in the cuprates", Feb. 6 (2003).
38. Dalhousie University. Raman Scattering and High Temperature Superconductors. May 14 (2001).
39. Dalhousie University. Raman Spectroscopy: A versatile tool, November 17 (2000).
40. Dalhousie University. Raman Scattering in High Temperature Superconductors, August (1999).

Conference Presentations

2017

1. K. C. Hewitt, P. Marignani, K. Brewer, I. Alwayn, *M. L. Castilho, L. J. Raniero, *S. Fashir. Nanoprobes for molecular imaging of EGFR overexpressing cancers. Canadian Cancer Research conference. Vancouver, BC Canada Nov. 5 (2017)
2. *C. L. D. Lee and K. C. Hewitt. First Demonstration of Surface Enhanced - Stimulated Raman Spectroscopy (SE-SRS) using low-power CW sources. Royal Society of Chemistry - SERS Faraday Discussions, Glasgow UK. Aug. 31 (2017) [oral]
3. *M. L. Castilho, V. P. S. Jesus, T. T. Bhattacharjee, T. S. Veriato, K. C. Hewitt and L. Raniero. Improved Photodynamic Therapy efficacy using a bifunctional EGF-Ce6 nanoprobe. Gordon Research conference on Cancer Nanotechnology: Multimodal Nano-Therapies against cancer. West Dover, VT, USA. June 19-20 (2017) [poster]

2016

4. *C. L. D. Lee and K. C. Hewitt. Coherent light emission from Oxonica™ nanoparticle dimers. Institute of Physics, Nanotechnology. London, UK. July (2016) [poster]
5. K. Brewer, P. Marignani, *C. L. D. Lee, *S. B. Fashir, *M. L. Castilho, *M. A. Hupman, L. J. Raniero, I. Alwayn and K. C. Hewitt. Nanobiophotonics for molecular imaging of cancer markers. Gordon Research Conference on Plasmonics and Nanophotonics. Newry, ME July 11-12 (2016) [poster]

2015

6. *C. L. D. Lee, *S. Fashir, *M. L. Castilho, *M. A. Hupman, L. J. Raniero, I. P. Alwayn and K. C. Hewitt. EGFR-specific nanoprobe biodistribution in mouse models. Vancouver nanomedicine day. Vancouver, BC, Canada. Nov. 2 (2015) [poster]
7. *S. A. Fashir, *M. L. Castilho, *M. A. Hupman, *C. L. D. Lee, L. J. Raniero, I. Alwayn and K. C. Hewitt. EGFR-Specific nanoprobe biodistribution in mouse models. SPIE Biophotonics South America, Rio de Janeiro, Brazil. June 23 (2015) [oral]

2014

8. I. Ferreria, G. B. Costa, L. Vieira, *M. L. Castilho, L. C. S. da Cruz, J. Ferreria-Strixino, K. C. Hewitt and L. J. Raniero. FT-IR Analysis of photodynamic therapy biochemical effects in cell line of human breast carcinoma. Brazilian Condensed Matter Physics Meeting. Costa do Sauipe, BA, Brazil May 15 (2014) [poster]
9. L. S. Vieira, I. Ferreira, J. Ferrerira-Stricina, K. C. Hewitt and L. Raniero. Efficiency of the functionalized metal nanoparticles with photosensitizer. Brazilian Condensed Matter Physics Meeting. Costa do Sauipe, BA, Brazil. May 13 (2014) [poster]

2013

10. *L. Lucas and K. C. Hewitt. Nanobiophotonics for molecular imaging of cancer markers: Development of Epidermal Growth Factor Receptor (EGFR) Specific Nanoprobes for Surface Enhanced Raman Spectroscopy (SERS). Gordon Research Conference on Cancer Nanotechnology. West Dover, VT USA. July 15-16 (2013) [poster]

2012

11. *L. Lucas and K. C. Hewitt. Nanobiophotonics for molecular imaging of cancer markers: Development of Epidermal Growth Factor Receptor (EGFR) Specific Nanoprobes for SERS. SPEC 2012 – Shedding New Light on Disease. Chiang Mai, Thailand. Nov. 15 (2012) [oral]
12. *L. Lucas and K. C. Hewitt. EGF conjugated nanoparticles for imaging EGFR over-expressing cells using Surface Enhanced Raman spectroscopy. Plasmonics in Biology and Medicine IX – SPIE BIOS. San Francisco, CA Jan. 22 (2012) [oral]

2011

13. K. C. Hewitt, *M. Saadat and *R. J. Sanderson. Preparation of novel and existing superconductors using a spatial composition spread approach. Gordon Research Conference on Superconductivity. Waterville Valley, NH Jun. 6 (2011) [poster]
14. S. Livingstone, *L. Lucas, J. Parker, D. Woodhall, H. Sapp, K. C. Hewitt and I. Alwayn. The Application of Raman Spectroscopic Analysis for the Evaluation of Hepatic Steatosis. Dal Surgery Research Day. Halifax, NS Apr. 29 (2011) [poster]

2010

15. K. C. Hewitt, *M. Saadat and *R. J. Sanderson. Densely mapping the phase diagram of the cuprate superconductor $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ ($0 < x < 0.18$) using a spatial composition spread approach. Canadian Association of Physicists Annual Congress. Toronto, ON June 9 (2010) [oral]

2009

16. *L. Lucas, M. X. Chen, *A. Smith, M. Korbely, H. Zeng, P. W. K. Lee and K. C. Hewitt. Imaging cellular EGFR distribution using SERS. Canadian Undergraduate Physics Conference. Edmonton, AB October 2-5 (2009) [oral]
17. *M. Saadat and K. C. Hewitt. Densely mapping phase space of cuprate superconductors using a spatial composition spread approach. 9th International Conference on Materials and Mechanisms of Superconductivity. Tokyo, Japan, Sept. 8 (2009) [oral]
18. *L. Lucas, M. X. Chen, *A. Smith, M. Korbely, H. Zeng, P. W. K. Lee and K. C. Hewitt. "Imaging Epidermal Growth Factor receptor (EGFR) over-expression using SERS". Institute for Research in Materials Research Day. Halifax, NS June 24 (2009) [poster]
19. *M. Saadat and K. C. Hewitt. Densely mapping phase space of cuprate superconductors using a spatial composition spread approach. Gordon Research Conference – Superconductivity, Hong Kong, June 10, (2009) [poster]
20. K. C. Hewitt, M. X. Chen, *L. Lucas, *A. Smith, M. Korbely, H. Zeng, and P. W. K. Lee. Imaging cancerous cells using surface enhanced Raman spectroscopy. Canadian Association of Physics Congress, Moncton, NB, June 10 (2009). [oral]
21. K. C. Hewitt, M. X. Chen, *L. Lucas, *A. Smith, M. Korbely, H. Zeng, and P. W. K. Lee. Imaging EGFR distribution using surface enhanced Raman spectroscopy. SPIE Photonics West – Plasmonics in Biology and Medicine VI. San Jose, CA USA Jan 26 (2009) [oral]

2008

22. *L. Lucas, M. X. Chen, *A. Smith, M. Korbely, H. Zeng, P. W. K. Lee and K. C. Hewitt. "SERS Imaging of Cancerous Cells Overexpressing EGFR". Canadian Undergraduate Physics Conference. Toronto, ON October 16-20 (2008) [oral]
23. K. C. Hewitt, *J. Li, and *J. St. Aubin. Mechanically roughened copper/gold-coated surfaces as an inexpensive SERS substrate. XXIst International Conference on Raman Spectroscopy. London UK, Aug. 19, (2008) [poster]
24. K. C. Hewitt, X. K. Chen, *L. Lucas, M. Korbely, H. Zeng and P. W. K. Lee. SERS Imaging of cancerous cells overexpressing EGFR. XXIst International Conference on Raman Spectroscopy. London UK, Aug. 21 (2008) [poster]
25. *R. J. Sanderson and K. C. Hewitt. Magnetron sputter deposition of a 48-member cuprate superconductor library: $\text{Bi}_2\text{Sr}_2\text{Y}_x\text{Ca}_{1-x}\text{Cu}_2\text{O}_{8+\delta}$ ($0.5 < x < 1$) linearly varying in steps of $\Delta x = 0.01$. APS March meeting, New Orleans, LA. March 12 (2008) [oral]

2007

26. *R. J. Sanderson and K. C. Hewitt. Magnetron sputter deposition of a 48-member cuprate superconductor library: $\text{Bi}_2\text{Sr}_2\text{Y}_x\text{Ca}_{1-x}\text{Cu}_2\text{O}_{8+\delta}$ ($0.5 < x < 1$) linearly varying in steps of $\Delta x = 0.01$. AGM and Institute of Physics Superconductivity Group meeting. London, UK. Nov. 30 (2007) [poster]

2006

27. K. C. Hewitt, *R. J. Sanderson & *M. Saadat. Densely mapping phase space of cuprate superconductors using a spatial composition spread approach. 4th International Workshop on Combinatorial Materials Science. San Juan, Puerto Rico. Dec. 6, (2006) [oral]
28. K. C. Hewitt, *J. St. Aubin and A. E. George. A novel and simple method for preparing SERS active substrates. International Conference on Raman spectroscopy. Yokohama, Japan. Aug. 24 (2006) [poster]
29. *R. J. Sanderson and K. C. Hewitt. The effect of process gas pressure, target composition, Ar:O₂ ratio and substrate bias on the preparation of thin films of the superconductor $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$. APS March Meeting. Baltimore, MD. [Bull. Amer. Phys. Soc. March 17 (2006) [oral]
30. *J. St. Aubin & K. C. Hewitt. Surface-enhanced Raman scattering of a hydrophilic ligand (tiopronin) adsorbed on gold nanoparticles. APS March meeting. Baltimore, MD. March 13, (2006) [oral]

2005

31. *R. Sanderson and K. C. Hewitt. Crystallization of $\text{Bi}_2\text{Sr}_2\text{Ca}_{1-x}\text{Y}_x\text{Cu}_2\text{O}_y$ ($0 \leq x \leq 0.5$) thin films prepared by a spatial composition spread approach. CAP Congress, Vancouver, BC. June 6 (2005). [Physics in Canada 61 (3), 74 (2005)] [oral]
32. K. C. Hewitt, *P. A. Casey, M. Jericho and *R. Sun. High-throughput resistivity apparatus for characterization of combinatorial libraries. American Physical Society March Meeting. Los Angeles, California, March 22 (2005) [Bull. Amer. Phys. Soc. 50 (1), 497 (2005)] [oral]

2004

33. *R. J. Sanderson and K. C. Hewitt. Continuous map of the phase diagram of high temperature superconductors using a composition spread approach. Gordon Research Conference on Superconductivity. Queen's college, Oxford UK. September 21 (2004) [poster]
34. K. C. Hewitt, X. K. Chen, C. Roch, J. Chrzanowski, J. C. Irwin, E. Altendorf, R. Liang, D. Bonn, and W. N. Hardy. Hole concentration and Phonon renormalization in Ca-doped $\text{YBa}_2\text{Cu}_3\text{O}_y$ ($6.76 \leq y \leq 7.00$). Gordon Research Conference on Superconductivity. Queen's college, Oxford UK. September 20 (2004) [poster]
35. K. C. Hewitt and *R. J. Sanderson. Continuous map of the phase diagram of high temperature superconductors using a composition spread approach. CAP/CASCA/COMP/BSC Congress. Winnipeg, Manitoba, June 15 (2004). [Physics in Canada 60 (3), 89 (2004)] [oral]
36. K. C. Hewitt and *R. J. Sanderson. Continuous map of the phase diagram of high temperature superconductors using a composition spread approach. American Physical Society March Meeting. Montreal, Quebec, March 23 (2004). [Bull. Amer. Phys. Soc. 49 (1), 370 (2004)] [oral]

2003

37. K. C. Hewitt, X. K. Chen, C. Roch, J. Chrzanowski, J. C. Irwin, E. Altendorf, R. Liang, D. Bonn, and W. N. Hardy. Hole concentration and Phonon renormalization in Ca-doped $\text{YBa}_2\text{Cu}_3\text{O}_y$ ($6.76 \leq y \leq 7.00$). American Physical Society March Meeting. Austin, Texas. March 3 (2003) [oral]

2002

38. A. Bonakdarpour, K. C. Hewitt, T. D. Hatchard, M. D. Fleischauer and J. R. Dahn. Simple Combinatorial Synthesis of Binary Systems: Discovery of a BCC- $\text{Mo}_{1-x}\text{Sn}_x$ ($0 \leq x \leq 0.42$) solid-solution phase. American Physical Society March Meeting. Indianapolis, Indiana. March 19 (2002) [oral]

2001

39. A. Bonakdarpour, K. C. Hewitt, T. D. Hatchard, M. D. Fleischauer and J. R. Dahn. Combinatorial synthesis of $\text{Mo}_{1-x}\text{Sn}_x$ films: Electrochemistry, structure & composition. 199th Electrochemical Society Meeting, San Francisco, California USA, September (2001) [oral]

1999

40. K. C. Hewitt, N. L. Wang, J. C. Irwin, D. M. Pooke, A. E. Pantoja and H. J. Trodahl. The 590 cm^{-1} B_{1g} feature in underdoped $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$, University of British Columbia, Vancouver BC, Canada. May 21 (1999) [oral]
41. K. C. Hewitt, N. L. Wang, J. C. Irwin, D. M. Pooke, A. E. Pantoja and H. J. Trodahl. On the 600 cm^{-1} B_{1g} feature in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$. American Physical Society March Meeting. Georgia World Congress Center, Atlanta GA, USA. March 22 (1999) [oral]
42. Determination of oxygen concentration in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ from Raman spectra. American Physical Society March Meeting. Los Angeles Convention Center, Los Angeles CA, USA. March 17 (1999) [oral]

1997

43. K. C. Hewitt and J. C. Irwin. Raman scattering investigation of the superconducting gap symmetry in overdoped $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$. American Physical Society March Meeting. Kansas City Convention Center, Kansas City MO, USA. March (1997) [oral]

1995

44. K. C. Hewitt, X. K. Chen, X. Meng-Burany, A. E. Curzon and J. C. Irwin. Lattice Vibrational Modes in Bi-2201 and the influence of the structural modulation. American Physical Society March Meeting. San Jose Convention Center, San Jose Ca USA. March 20 (1995) [oral]

1993

45. K. C. Hewitt, A. Martin, Y. H. Shi and M. J. G. Lee. Raman investigation of Pb-Substituted $\text{Bi}_2\text{Sr}_2\text{CuO}_{6+\delta}$. American Physical Society March Meeting. Seattle Convention Center, Seattle WA, USA. March (1993) [oral]

Education Activities

Graduate student responsibilities

Student Name	Degree sought	Year expected/completed	Responsibility
Chris Lee	MSc	2017	Supervisor
Maiara Lima Castilho	PhD	2016	Co-supervisor
Steven Patterson	PhD	2013	Co-supervisor
Leanne Lucas	MSc	2013	Supervisor
James A. Rioux	PhD	2013	Co-supervisor
Mehran Saadat	MSc	2010	Supervisor
Elizabeth Orton	MSc	2008	Co-supervisor
Robert J. Sanderson	PhD	2009	Supervisor
Hafeez Anwar	PhD	2014	Advisory committee
Sabri Elatresh	PhD	2013	Advisory Committee
Reuble Mathew	PhD	2014	Advisory Committee
Eric Karhu	PhD	2011	Advisory Committee
Corinne Gullekson	MSc	2011	Internal Examiner
Stephanie Thomas	MSc	2010	Advisory Committee
Brad Joyce	MSc	2009	Advisory Committee
Liao Peng	PhD	2010	Advisory Committee
Tim Hatchard	PhD	2004	Advisory Committee
Rong Sun	MSc	2004	Advisory Committee
Jean-Sabin McEwen	MSc	2002	Internal Examiner

Undergraduate Honors Students supervised

No.	Name	Thesis title	Semester
11	Ravi Rai	CW Simulated Surface Enhanced Raman spectroscopy	2017
10	Joshua Sampson	SRS-SERS and SERS based imaging of nanoparticles in cells	2016-17
9	Chris Lee	Holographic Raman imaging	2013-14
8	Allan Hupman	Core-shell silver-gold nanoparticles	2014-15
7	Ivan Kostylev	Densely mapping the two-magnon feature in La214	2010
6	Aaron Smith	Photothermal treatment and detection of cancerous tissue	2007-08
5	Mehran Saadat (SMU)	Densely mapping the phase diagram of cuprates	2006-07
4	Joel St. Aubin	Surface enhanced Raman spectroscopy of hemoglobin	2005-06
3	Philip Casey	High throughput resistivity apparatus	2004-05
2	Shoan Kale	Superconducting potential of lithium borocarbides	2003
1	Greg MacDonald	Temperature dependent x-ray scattering	2003

Summer students supervised

No.	Student Name	Research Project	Award held	Year
25	Joshua Sampson	Silver nanopores for EGFR	NSERC	2016
24	Allan Hupman	Core-Shell silver-gold nanoparticle	NSERC USRA	2014
23	Samia B. Fashir	EGF nanopores and immune response in mice models	ILA-FoS	2014
22	Ivan Kostylev	High throughput resistivity		2011

21	Adam Forget	Raman spectro. and rotating AFM	Burgess McKittrick	2011
20	Javad Ghassemi	Raman spectroscopy of liver	NSERC	2011
19	Starla Talbot	SERS and glutamate release	NSERC	2011
18	Leanne Lucas	Imaging EGFR		2010
17	Peter Smith	Spectrometer construction	Burgess McKittrick	2010
16	Adam Forget	Spectrometer construction	Burgess McKittrick	2010
15	Ishrat Jalal	SERS Detection of neurotransmitter release		2009
14	Leanne Lucas	Imaging EGFR Distribution with SERS		2008/09
13	Jalianne Li	SERS of Blood disorders		2007
12	Mark Maillet	Tip Enhanced Raman spectroscopy		2007
11	Mehran Saadat	La _{2-x} Sr _x CuO ₄ synthesis by SCSA	NSERC USRA	2006
10	Chelsea Nisbett	Synthesis of gold nanoparticles	Burgess McKittrick	2005
9	Joel St. Aubin	SERS of AA and hemoglobin	NSERC USRA	2005
8	Aaryn Tonita	Triple grating spectrometer	NSERC USRA	2004
7	Philip Casey	Combi-resistivity apparatus	NSERC USRA	2003
6	Bradley Beaver	Na _x CoO ₂ .yH ₂ O synthesis	NSERC USRA	2003
5	Ryan Lewis	Na _x CoO ₂ .yH ₂ O synthesis	Burgess McKittrick	2003
4	Benjamin Turnbull	Synthesis of Bi ₂ Sr ₂ CaCu ₂ O ₈		2003
3	Shoan Kale	Preparation of thin film Li _x BC	NSERC USRA	2002
2	Jamie Cordes	200-channel resistivity probe	NSERC USRA	2002
1	Mark Sunderland	Preparation of bulk Li _x BC		2002

Publications related to teaching

1. K. C. Hewitt. Discourse and Dat course. *Focus (on university teaching and learning)*. **12** (1), 2-3 (2002).
2. Faculty Mentoring at Dalhousie University: Comments from Learning Associate Kevin Hewitt, PhD. 10 minute video, The Office of Instructional Development & Technology, Producer: Susan Holmes, MEd, Associate Professor, Henson College. Sept. 2002

Invited Talks & Presentations – Science/Other education

1. Holography: Making scratch holograms. Yakutia International Science Games, Yakutsk, Russia, July 10 (2018)
2. *Hidden figures: making the invisible, visible - Black Nova Scotians in science and technology*, Nova Scotia Community college. Halifax, NS Feb 7 (2017)
3. *Shared Governance at Canadian Universities*, Canadian University Boards Association Annual Meeting, Panelist, Halifax, NS, Canada, April 29 (2016)
4. *STEM Outreach to Underrepresented Communities. "Outreach to the African-Canadian community."* American Physical Society, March Meeting, Forum on Education in Physics session, Boston, MA. Feb. 28 (2012)
5. *Preparing and Troubleshooting labs*. Dalhousie University TA Days, Sept 10 (2008)
6. *Imhotep's Legacy After School Science Enrichment Program for African Nova Scotian Learners*. American Physical Society March Meeting Kevin Hewitt, Emmanuel Nfonoyim, Barb Hamilton-Hinch, Margo Hampden, Wayn Hamilton, New Orleans, LA, [Bull. Amer. Phys. Soc. 53(2)] March 12 (2008)
7. *Use of the Classroom Performance System in PHYC 1100*. Course Design Workshop – Strategies Day. Dalhousie University, Center for University Teaching. Dec. 11 (2007)
8. *African Contribution to Science*. Nova Scotia Community College – Akerley Campus. May 7 (2007).
9. *Challenges in Physics Education Today and the Role of Technology*. Panelist. John Wiley and Sons Canada Focus Group. MaRS Collaboration Centre, Toronto, ON. Oct. 13 (2006)
10. *What do water and oil, balloons and needles have to do with Sickle cell anemia?* Sickle Cell Information session. Watershed Association Development Enterprises. Dartmouth, NS. June 25 (2005).
11. *The Physics of music*. SHAD valley. Dalhousie University, Halifax, Nova Scotia. July 14, (2004).
12. *What do water and oil, balloons and needles have to do with Sickle cell anemia?* East Preston Recreation Center. East Preston, NS. Nov. 1 (2003).
13. *How motors work*. Africentric Science Summer Camp. St. Francis Xavier University. Antigonish, NS. July 17 (2003).

14. *Embracing your future in science*. BEA Math and Science Camp, Dalhousie University, July 7 (2003).
15. *Physics and Sickle Cell Anemia*. Visions of Science 2003. University of Toronto. May 17 (2003).
16. *Seeing is believing...?*. Visions of Science 2003. University of Toronto, Audience: approximately 500 middle school (Grade 6-8) students from the Toronto area. May 16 (2003).
17. *Science Fair judge and presenter*, Feb. 10 & April 17, 2003. Grade 2-5. Nelson Wynder Elementary School. Invited to present science enrichment activities (Magnetism and superconductors) and judge the science projects of Grade 2-5 students at this school in North Preston. Feb. 10 (2003).
15. *Facilitating Inclusion of African Nova Scotian Learners in Secondary Mathematics and Science: An Interactive Professional Development Inservice for participating HRSB Teachers*. Halifax Regional School board. Halifax, NS. May 15 (2002).
16. *"The Matchmakers tale: Three Years of Faculty Mentoring at Dalhousie University."* Dalhousie Conference on University Teaching and Learning: Pedagogy First: Supporting Learning and Teaching with Technology. May 8 (2002).
17. *Understanding Batteries*. Oxford School Science and Technology Conference. Halifax, NS. May 7 (2001)
18. *Seeing is believing...?*, The Afrocentric Science Academy, Saint Mary's University, October 14th and 21st (2000).
19. *Science & Your future possibilities*, Dalhousie University Transition Year Program Graduation, April 20 (2000).
20. *Promoting Cultural Diversity within the Classroom and Across the Campus*, Simon Fraser University, TA/TM Day, Workshop leader, Sept. 10 (1999).
21. *Holograms*. Grade 4-6 Science Open House, Simon Fraser University, May. 5 (1999).
22. *Festival of Science and Technology Open House*, Simon Fraser University, Oct. 23 (1998).
23. *Sundials, Building a battery, Building a motor*. Akoma Ntoaso - Youth Building Bridges Together. Fraserview Boys and Girls Club, Vancouver BC, Sept. 27 (1998).

Science Education grants

Imhotep's Legacy Academy (2012-2015) Funding Source: NSERC, Promoscience grant	\$50,133
Imhotep's Legacy Academy (2011-2021) Funding Source: TD Canada Trust	\$1,000,000
Imhotep's Legacy Academy (2009-14) Funding Source: EnCana Corporation	\$328,000
Imhotep's Legacy Academy (2009-10)	\$355,038
Imhotep's Legacy Virtual High School Project (2008) Funding Source: NS Department of Education	\$97,000
Imhotep's Legacy after school project (2007-2009) Funding source: NSERC, Promoscience grant	\$69, 999
Imhotep's Legacy full-time coordinator (2007-08) Funding source(s): NS Department of Education	\$ 34, 000
Imhotep's Legacy VI After School Science Enrichment Program for Grade 7,8,9 (2007-08) Participating schools: Oxford, Caledonia, St. Pat's Alexandra, Truro Jr. High Funding source(s): Department of Education, Faculty of Science, Council on African Canadian Education, Office of African Nova Scotian Affairs	\$ 46, 000
Imhotep's Legacy VI After School Science Enrichment Program for Grade 7,8,9 (2007-10) Funding source(s): Faculty of Science	\$20, 000
Dalhousie Holotent visits to public schools (2006-2009) Funding source: VP-Academic	\$10, 500

Imhotep's Legacy VI After School Science Enrichment Program for Grade 7,8,9 (2006-07) Participating schools: Oxford, Caledonia, St. Pat's Alexandra, Truro Jr. High Funding source(s): Department of Education, Faculty of Science, Council on African Canadian Education, Office of African Nova Scotian Affairs	\$41, 000
Imhotep's Legacy V After School Science Enrichment Program for Grade 7,8,9 (2005-06) Participating schools: Caledonia, St. Pat's Alexandra, Funding source(s): Nova Scotia Department of Education & Faculty of Science, Dalhousie	\$15,500
World Year of Physics Travelling Holography tent (2005) Dean of Science & Vice President, Dalhousie	\$30,000
Imhotep's Legacy IV After School Science Enrichment Program for Grade 7,8,9 (2004-05) Participating schools: Caledonia, St. Pat's Alexandra Funding source(s): Nova Scotia Department of Education & Faculty of Science, Dalhousie	\$12,800
Imhotep's Legacy III After School Science Enrichment Program for Grade 7,8,9 (2003-04) Funding source(s): Nova Scotia Department of Education & Faculty of Science, Dalhousie	\$12,500
Total funding (2003-)	\$2,122,470

Science Education Initiatives

- Imhotep's Legacy Academy (ILA) is an effective and successful provincial, STEM outreach initiative I co-founded in 2003, built on a strong University-Community partnership. It aims to redress the under-representation of African Canadians in post-secondary STEM studies. Starting with \$12,500 in funding in 2003 the programming and geographic reach has grown as has funding, approaching \$0.5M obtained through federal (NSERC Promoscience), provincial (Dep't of Education) and corporate (EnCana) sponsorship. ILA offers several programs/opportunities:
 - (1) The After School Program (ILASP) component is structured to sustain contact with the learners over three years (grade 7, 8, 9) during a crucial phase in their academic careers. Graduate and undergraduate science students of African descent act as mentors, and undergo rigorous training by professors of African descent (Biology, Physics, Engineering, Chemistry) in the delivery of science, technology, engineering and math (STEM) enrichment activities. The activities are presented biweekly to ANS students in grade 7, 8 and 9 at sites across the province (Sydney, Truro, Dartmouth, Guysborough and Halifax), alternating with homework help. The undergraduate students (approx. 40) have themselves been motivated to pursue STEM Masters and Doctoral degrees and professional programs such as Medicine and Dentistry.
 - (2) The virtual school program (ILVSP), launched in 2009, is tailored to provide tutoring and supplemental education support in science and math to high school students anywhere in the province where internet access is available, effectively maintaining contact with the participants of the after-school program in order to continue to develop their science and math aptitude. Furthermore, ILVSP is designed to mitigate the geographic and economic constraints that can hinder African Nova Scotian learners access to science learning opportunities;
 - (3) The 4-month Spring-Summer Studentship Program (SSSP) offers post-secondary students the skills building and community leadership development tools needed to succeed in today's global technology driven environment.
 - (4) The First Lego League Robotics participation began in 2012, with teams reaching the provincial finals and winning numerous awards (see below), culminating in a Global Innovation Award; as the top 20 in the world and competing in the Global Innovation Award event in Washington, DC (June 2017)
 - (5) Joint summer student research positions for ILA staff established with the Faculty of Medicine (2011), Faculty of Science, Faculty of Health, Faculty of Engineering to provide research experience in the lab
 - (6) TD Opportunity scholarships established in 2011 for ILA graduates, to reduce financial barrier to PSE access
- The Academy now has offices on campus with a virtual learning centre. The excellence of our program was recognized in 2008, 2011 and 2012 by the Discovery Centre (Nova Scotia's science centre) and The Lieutenant Governor of Nova Scotia, Her Honor Mayann E. Francis, in 2007 and 2009.

Imhotep's Legacy Academy (Chronology of events, major milestones, awards)

16-17 - **ILA provided with infrastructure funding for multiuser facility at Sexton Campus (6000 sq ft), to be opened in 2018, following joint Senate-Admin discussion of adding Technology Diversity to Sexton expansion**

- ILA's "Legos 'R Us" FLL Team (Oxford Jr. High School) wins:
 - Robot Design Award – Regional Qualifier competition
 - Project Innovative Solution Award – Provincial Championships
- ILA's "Legos 'R Us" FLL Team (Oxford Jr. High School) receives:
 - Global Innovation Award Team Nomination (the team attends the 2017 Global Innovation Award event in Washington, DC, June 18-20, 2017)

13-14 – **ILA full suite of program running. Relinquished role as President**

- ILA's "Top Robots" FLL Team (Truro Jr. High School) wins:
 - Mechanical Design Award – Provincial Championships
 - Judges Award for Mentorship (Haley Matthews, Assistant Coach) – Provincial Championships

12-13 **ILA First Lego League (FLL) program component added**

- Teams trained to compete in the FLL competition
- ILA's "Legos 'R Us" FLL Team (Oxford Jr. High School) wins:
 - - Judges Choice Award – Regional Qualifier competition - Technical Design Award – Provincial Championships
 - - Mechanical Design Award – Provincial Championships
- ILA's "Top Robots" FLL Team (Truro Jr. High School) wins:
 - - Presentation Award – Regional Qualifier competition
- ILA's FLL Team in Sydney (Memorial Jr. High School) wins:
 - - Core Values Award – Regional Qualifier competition
- Nova Scotia Discovery Centre Science Champion finalist (one of 3 in province)

11-12 **ILA Scholarships established**

- Summer research scholarships established for ILA staff pursuing Medicine, Engineering and Science (jointly funded with respective faculties); extending ILA's program offerings to post-secondary students
- TD Bank donates \$1 million to establish Opportunity Scholarships for ILA graduates.
- Nova Scotia Discovery centre Science Champion finalist (one of 3 in province)

10-11 **ILASP site established at Antigonish, Nova Scotia**

- With 4-yr (82K/yr funding from EnCana corporation), ILA site established in Antigonish

ILA Office administrator hired

- Part-time office administrator position created

09-10 **ILA offices**

- VP Student Services obtains space in the Killam library for ILA offices

08-09 **IL VHSP**

- This program extends Imhotep's legacy to high schools in the province; provides one-on-one tutoring to African Nova Scotian learners via remote web link. Funding Source: NS DoE
- Nova Scotia Discovery centre Science Champion finalist (one of 3 in province)

07-09 **ILASP site established in Sydney, NS**

- NSERC Promoscience funding obtained to support expansion of the ILASP to Sydney, NS.

ILA manager

- Funding obtained from NS Department of Education to support a full time program manager

07-08 **ILASP VII**

- Participating schools: Oxford, Caledonia, St. Pat's Alexandra, Truro Jr. High
- Funding source(s): Department of Education, Faculty of Science, Council on African Canadian Education, Office of African Nova Scotian Affairs

- 06-07 **ILASP VI**
- Program expands to Truro Jr. High becoming provincial in scope
 - Participating schools: Caledonia, St. Pat's Alexandra, Truro Jr. High
 - Funding source(s): Department of Education, Faculty of Science, Council on African Canadian Education, Office of African Nova Scotian Affairs
 - Lieutenant Governor Mayann Francis attends closing ceremonies.
- 05-06 **ILASP V**
- Participating schools: Caledonia, St. Pat's Alexandra,
 - Funding source(s): Nova Scotia Department of Education & Faculty of Science, Dalhousie
- 04-05 **ILASP IV**
- expansion of ILASP to an additional school (St. Patrick Alexander) and to a 20-week program. New activities included: How does a breathalyzer work? How do metal detectors work? How does DNA work? How does bread work?
 - Participating schools: Caledonia, St. Pat's Alexandra
 - Funding source(s): Nova Scotia Department of Education & Faculty of Science, Dalhousie
- 03-04 **ILASP III**
- Funding source(s): Nova Scotia Department of Education & Faculty of Science, Dalhousie
 - An 11-week, after-school, science exploration project for African Nova Scotian learners in Grades 7, 8, and 9 at Caledonia Junior High; developed lessons plans for science enrichment activities delivered at the school:
- 03 **Imhotep's Legacy Science Enrichment Saturday Summer School for ANS (May-June 2003)**
- a science enrichment program for grade 6, 7 and 8 ANS students, run on Saturdays at Dalhousie from 10am-2pm. Activities include: "How do CDs work," "Why do feet stink?" and "Why salt is used on our roads during the winter."
- 99 **Imhotep's Legacy: African Canadians in Science Saturday Workshop**
- Funding: SFU Department of Physics
 - Theme: "Seeing is Believing?" Biology and Physics of Optics through hands-on activities - Pinhole Cameras, Cow-Eye Dissections, making 3D films, Holography, Kaleidoscopes. K-3,4-7,8-9,10-12 aged groups. Introduced African Canadian Scientists and performed a magic show.
- In celebration of World Year of Physics, I established a holo-tent (portable dark room) which houses a free hands-on exhibit travelling to eight Nova Scotia communities throughout 2005: Halifax (Jan), New Minas (Feb), Truro (March), Amherst (April), Dartmouth (Sept), Sydney (Oct), Antigonish (Nov) and Shelburne (Dec). Inside the holo-tent, students of all ages, families and visitors can make a hologram to keep, see the inside of a laser, and experience amazing physics in action. Since then the holo-tent has paid visits to high schools in Nova Scotia and has played host to visitors from around the province, attracting over 1500 students thus far.

Dalhousie Holotent (Chronology of Events)

- 06-11 **Dalhousie Holotent visits to public schools**
- Funding: VP-Academic
 - the interest generated by our tour led us to establish yearly visits to high schools (Cole Harbour High, Halifax West, Sydney Mines); we have entertained visitors from across the province at Dalhousie. Approx. 2000 students have made holograms in our tent.
- 05 **World Year of Physics Travelling Holography tent**
- In celebration of World Year of Physics, established a holo-tent which houses a free hands-on exhibit travelling to eight Nova Scotia communities throughout 2005: Halifax (Jan), New Minas (Feb), Truro (March), Amherst (April), Dartmouth (Sept), Sydney (Oct), Antigonish (Nov) and Shelburne (Dec). Students of all ages, families and visitors made holograms to keep, explored the inside of a laser, and experience amazing physics in action. Over 1000 guests from across the province passed through the holo-tent during 2005.

- Imhotep's Legacy: African Canadians in Science, Theme: "Seeing is Believing?" Biology and Physics of Optics through hands-on activities - Pinhole Cameras, Cow-Eye Dissections, making 3D films, Holography, Kaleidoscopes. K-3,4-7,8-9,10-12 aged groups. Introduced African Canadian Scientists and performed a magic show - Burning \$100 bill, Magnetic Levitation, Disappearing Water. In association with Dirka Proud, Brooke Melles and under the auspices of the ad-hoc group, African Canadians for the Advancement of Science, and in collaboration with SFU Department of Physics, Association for Students of African Descent and Science World of British Columbia. Simon Fraser University (Harbour Center), June 5, 1999.
- Established a one-on-one tutoring program for African Canadian Youth under the auspices of the Association for Students of African Descent. 1994-1997

Professional activities & memberships

Activities

- *Peer Reviewer*, **Canadian Institute of Health Research** - Stage 1 Grant applications (2016-17)
- *Conference session Chair*, Biomedical Spectroscopy/Imaging, **60th International Conference on Analytical Sciences and Spectroscopy** (2015)
- *External Grant Reviewer*, **Canada Foundation for Innovation** – Leaders Opportunity Fund (2009)
- *External Grant Reviewer*, **Natural Sciences and Engineering Research Council of Canada** (2007)
- *Conference session Chair*, Experimental Techniques in Biomaterials Science, March Meeting of the **American Physical Society** (2006)
- *Conference session Co-Chair*, Topics in nanoscale and cooperative phenomena, March Meeting of the **American Physical Society** (2004)
- *External Grant Reviewer*, **Canadian Institute of Health Research** (2001, 2002)

Referee

- Journal of Biomedical Optics (10), Optics Express (3), Journal of Raman Spectroscopy (3), Journal of Biophotonics (2), PLOS One (1), Science – Translational Medicine (1), Proceedings of the National Academy of Sciences (1), Analyst (1), Applied Physics Letters (1), Physica C – Superconductivity (4), Physical Review B (3), Applied Spectroscopy (1)

Memberships

- SPIE – the international society for Optics and Photonics, Member (2008 -)
- Institute of Physics (UK), Member (2007-10)
- American Physical Society (US), Member (1993-2010)
- Canadian Association of Physicists, Member (1999-2011)
- Electrochemical Society, Member (2000-2002)
- Materials Research Society, Member (2000-2002)

Media features

1. Pathways to potential - Imhotep's Legacy Academy receives first Dal President's Award for Equity, Diversity and Inclusion. Dal news. June 20 (2018) <https://www.dal.ca/news/2018/06/20/pathways-to-potential--imhotep-s-legacy-academy-receives-dal-div.html>
2. Forging pathways for African Nova Scotian Youth – Imhotep's Legacy Academy's community impact. Dal news. Feb. 28 (2017) <https://www.dal.ca/news/2017/02/28/forging-pathways-to-university-for-african-nova-scotian-youth.html>
3. Dal report considers how to improve Aboriginal and Black/African-Canadian student access and retention. Dal news. Nov. 26 (2015) https://www.dal.ca/news/2015/11/26/dal-report-considers-how-to-improve-aboriginal-and-black-african.html?utm_source=dalnewsRSS&%3Butm_medium=RSS&%3Butm_campaign=dalnews
4. From Promise to Potential. Dal news. May 30 (2013) <https://www.dal.ca/news/2013/05/30/from-promise-to-potential.html>
5. Leaving a lasting legacy for African Nova Scotian youth. Dal news. May 17 (2012) <https://www.dal.ca/news/2012/05/17/leaving-a-lasting-legacy-for-african-nova-scotian-youth.html>
6. *Evoking Imhotep*. Dal news. July 6 (2011) <https://www.dal.ca/news/2011/07/06/evoking-imhotep.html>

7. *Stepping up*. Dal news. Feb. 16 (2011) <https://www.dal.ca/news/2011/02/16/opportunitygrant2.html>
8. *Imhotep's virtual school program*. Dal news. April 5 (2011) <https://www.dal.ca/news/2011/04/05/imhotep.html>
9. *Imagining where they can be*. Dal News. Feb. 16 (2011) <https://www.dal.ca/news/2011/02/16/opportunitygrant1.html>
10. *Bringing Diversity to the laboratory*. CBC Information Morning (90.5 FM). Halifax, NS, Feb. 15 (2011) <http://www.cbc.ca/informationmornings/2011/02/bringing-diversity-to-the-laboratory.html>
11. *Ancient Egyptian Legacy Inspires Future scientists*. Dalhousie Magazine. Vol. 26, No. 3, pg. 7 Winter (2010)
12. *Building on a Legacy*. Dal news. Sept. 4 (2009) <https://www.dal.ca/news/2009/09/04/imhotep.html>
13. *Imhotep's Legacy*. Dal news. April 1 (2009) <https://www.dal.ca/news/2009/04/01/imhotep.html>
14. *Imhotep's Legacy Closing Ceremony*. Maritime News (CTV). Halifax NS, June 7 (2007)
15. *Imhotep's Legacy*. Live at Five (CTV). Halifax NS, July 7 (2006)
16. *Leaving a Legacy*. Dalhousie News. Halifax NS, July 12 (2006) <https://www.dal.ca/news/2006/07/12/legacy.html>
17. *Project Inspires Black Students*. The Daily News (Halifax). Halifax NS, July 8 (2006)
18. *Laser Show at mall to provide Physics Fun*. The Antigonish Casket. Antigonish NS, Nov. 16 (2005)
19. *Dal physics holo-tent tours province*. The Chronicle Herald. Halifax NS, Oct 29 (2005)
20. *Dal researcher seeks better Medical test*. The Chronicle Herald, Halifax NS, Oct. 22 (2005)
21. *Light Science*. The Chronicle Herald. Halifax NS, May 2, (2005)
22. *Amherst Centre Mall hosting fun with physics*. Amherst Daily News. May 20 (2005)
23. *A fun day of science being held at the Truro Mall today*. The Daily News (Truro). April 30 (2005)
24. *All about lasers*. The Kentville Advertiser. Kentville NS, March 18 (2005)
25. *See how Physics Changes your life*. The Kentville Advertiser. Kentville NS, March 11 (2005)
26. Trailblazers Feature, Black to Business Magazine 28, pg .22. Fall (2004).
27. *Black Students Experience science hands on*. The Antigonish Casket. Antigonish NS, (2003)
28. Dalhousie Office of Instruction Development & Technology Video, New Faculty Mentoring program, Sept. 2002
29. VTV Television Breakfast Program, Imhotep's Legacy: African Canadians in Science, Vancouver BC, June 4, 1999

Administrative Activities

Dalhousie University: Committees

Current

- Senate, *Elected Chair* (2015 -)
- Board of Governors, *Member* (2015 -)
- Board Academic and Student Affairs (previously Academic Affairs and Research) committee, *Member* (2015 -)
- Board of Governors Ad Hoc Financial Planning committee, *Member* (2017 -)
- Board of Governors Presidential Review committee, *Member* (2017 -)
- Senate Planning and Governance Committee, *Chair* (2015 -)
- Senate Academic Programs and Research Committee, *Member* (2015 -)
- Senate Learning and Teaching committee, *Member* (2015 -)
- Strategic Enrolment Management and Pathways Program Rapid Taskforce, *Member* (2017 -)
- School of Nursing Appointments, Reappointments, Tenure and Promotion Committee for the tenure and promotion process, *Member* (2017 -)
- Search committee for University Advisor & Assistant Vice-President, Equity and Inclusion, *Member* (2017 -)
- Dalhousie Alumni Association Faculty Award of Excellence for Teaching, *Chair* (2016 -)
- Diversity and Inclusiveness Advisory committee, *Member* (2017 -)
- Dalhousie Academic Leadership Advisory board, *Member* (2015 -)

- Advisory Group for the Centre for Transformative Nursing and Health Research (CTNHR), *Member* (2016 -)
- Dalhousie 200th Anniversary Planning committee, *Member* (2015 -)
- Dalhousie University Ceremonial Mace Committee, *Member* (2015 -)
- Dalhousie Ceremonial Mace selection Panel, *Member* (2017-18)
- Nova Scotia Black and First Nations Students Graduate Student Scholarship Committee Adjudication committee, *Member* (2011 -)
- First Nations & Indigenous Black Students Entrance Scholarship Adjudication committee, *Member* (2004 -)
- McDonalds Chair Selection committee, *Member* (2016 -)

Past

- Faculty of Graduate Studies Prize Panel (Dalhousie Doctoral Dissertation Awards, the FGS Distinguished Service Award and the Governor General's Gold Medal Awards), *Member* (2015-2016)
- Search Committee, Dean of the Faculty of Health Professions, *Member* (2015-2016)
- Senate Principles and Values Work Group, *Co-chair* (2014-2015)
- Physics and Atmospheric Science Undergraduate Recruiting & Outreach, *Member* (2002-2008)
- Improving Access and Retention of African Canadian and Aboriginal Students, *Co-Chair* (2014-2015)
- Senator, Dalhousie University, Faculty of Science Representative (2010-2015)
- Graduate Advisory Committee, Physics and Atmospheric Science, *Chair* (2011- 2015)
- Graduate Program, Physics and Atmospheric Science, *Chair* (2011-2015)
- Search committee, Physics and Chemistry DDFA Search, *Member* (2012)
- Radiation Advisory Committee, *University Laser Safety representative* (2006-2012)
- Medical School Admissions committee, Dalhousie University, *Faculty of Science Representative* (2010 – 2012)
- Faculty of Science Outreach committee, *Member* (2003-2012)
- Instructor Search Committee, Physics and Atmospheric Science, *Chair* (2009-10)
- Mathematics and Statistics Chair Advisory Committee, *Chair* (2008-09)
- Chemistry Chair Advisory Committee, *Member* (2006-07)
- Search Committee – University Faculty Award, *Chair* (2006)
- Physics and Atmospheric Science Search committee - Medical Physicist, *Member* (2005-06)
- World Year of Physics 2005, *Chair* (2004-2005)
- Mentoring Program for Black and Aboriginal Students, *Member* (2004-2005)
- Search committee - Associate Dean, *Member* (2004)
- James Robinson Johnson Advisory Board, *Chair* (2003-2004)
- Physics and Atmospheric Science Search committee, University Faculty Award, *Member* (2003-2005)
- Physics and Atmospheric Science Search Committee - Polymer Electronics, *Member* (2003)
- Physics and Atmospheric Science Graduate Advisory and Recruiting, *Member* (2002-2005)
- Physics and Atmospheric Science Curriculum Committee, *Member* (2002-2004)

External Bodies: Elected Positions

- National Advisory Committee on Equity, Diversity and Inclusion Policy (ACEDIP), Tri-Agency Institutional Programs Secretariat (TIPS), *Member*, *Appointee of the President of TIPS* (2017-)
- Nova Scotia Institute of Science, *Council member* (2012-2015)
- Canadian Association of Physicists, *Nova Scotia & PEI Councilor* (2002-2004).
- American Physical Society Committee on Minorities in Physics, *Member* (first and only Canadian admitted) (2002-2005).

University bodies: Elected Positions*

- Dalhousie Senate, *Chair* (2015 -)
- Dalhousie Senate Planning and Governance committee, (2013 -)
- Dalhousie Senate, *Member* (2010 – 2015)
- Dalhousie Faculty Association Executive, *Member-at-large*, *Nomination by acclamation declined* (2005, 2006)

- SFU Senate, Student Representative, (1996-1997)
- SFU Senate Committee on International Activities, Student Representative (1996-2000)
- SFU Senate Committee on Academic Planning, Student Representative (1996-1997)
- SFU Senate Graduate Studies Committee, Faculty of Science Student Representative (1994-1995)
- SFU Physics Graduate Student Association, Vice President (1993-1994)

Community organizations: Elected Positions

- Black Cultural Centre Committee, *Board of Directors* (1996-1997)
- St. Vincent and the Grenadines Association of Greater Vancouver, *Board of Directors* (1995-1997)

Student Organizations: Elected

- Association for Students of African Descent (SFU), *Studies in African Heritage Committee Chair* (1995-1998)
- Association for Students of African Descent (SFU), *Founding President* 1994-1995
- African Caribbean Students Association (UofT), President, 1989-1990
- African Caribbean Students Association (UofT), Vice-President, 1988-1989

Other Committees/Organizations

- Imhotep's Legacy Academy, *Founding president* (2003 –14)
- SVGAGV Scholarship Committee, Vancouver, BC, (1999-2000)
- Simon Fraser University, Diversity Working Group, Center for University Teaching (1999-2000)
- Association for Students of African Descent, *Tutor* (1994-97)
- Black History Month (Vancouver, BC) Opening Ceremonies committee, *Member* (1996)
- S.U.C.E.S., Scarborough Board of Education, *Tutor* (1991-1992)