

UNIVERSITY OF VICTORIA

FACULTY CURRICULUM VITAE

Name: GEBALI, Fayez

Department: Elec. & Comp. Eng.

Faculty or School: Engineering

Citizenship: Canadian since 1975

Employment Date: 1 September 1984

Last Revised: 15 August 2011

1 DEGREES AND DIPLOMAS

Degree	Field	Institution	Year Granted
PhD	Elec. Eng.	University of British Columbia	1979
B.Sc. (Hon.)	Applied Mathematics	Ain Shams University	1974
B.Sc. (Hon.)	Elec. Eng.	Cairo University	1972

Title of Thesis or Dissertation

The Photo-refractive Effect in Lithium Niobate and its Applications

2 MAJOR FIELDS OF SCHOLARLY, PROFESSIONAL AND RESEARCH INTERESTS

- Algorithms and implementation on multiprocessor systems
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- Networks on chips (NoC) for three-dimensional integrated circuits (3D-NoC)
- Wireless network protocols
- Hardware and multithreaded implementations of crypto systems
- Hardware and multithreaded implementations of DSP algorithms

3 POSITIONS HELD PRIOR TO APPOINTMENT AT UNIVERSITY OF VICTORIA (and also Outside University of Victoria) (Include academic and other)

Inclusive Years	Title/Position	Institution/Organization
Sep 2007– Aug 2008	Visiting Professor	Kuwait University
1996	Visiting Professor	King Fahd University of Petroleum & Minerals

4 POSITIONS HELD PRIOR TO APPOINTMENT AT UNIVERSITY OF VICTORIA

Inclusive Years	Title/Position	Institution/Organization
1983–1984	Research Associate	University of Waterloo
1979–1982	Research Associate	Simon Fraser University
1975–1979	Research Assistant	University of British Columbia
1972–1986	Instructor	Cairo University

5 APPOINTMENTS AT UNIVERSITY OF VICTORIA

5.1 Academic

Inclusive Years	Rank	Department
Jul. 1991–	Professor	Elec. and Comp. Eng.
May 1987–Jun. 1991	Associate Professor	Elec. and Comp. Eng.
Jul. 1986–Apr. 1987	Associate Professor	Elec. Eng.
Sep. 1984–Jun. 1986	Assistant Professor	Elec. Eng.

5.2 Administrative-Formally Designated (Board of Governors) positions carrying a stipend and/or release time

Inclusive Years	Title	Academic Unit
Jul. 2011–June 2016	Chair	Faculty of Engineering
Jan. 2011–June 2011	Acting Chair	Faculty of Engineering
Jul. 2002–June 2007	Associate Dean	Faculty of Engineering

6 MEMBERSHIPS AND OFFICES HELD IN LEARNED AND PROFESSIONAL SOCIETIES

Association of Professional Engineers and Geoscientists of British Columbia (APEGBC)	Member	June 1985–
Association of Professional Engineers of Egypt	Member	June 1972–
Canadian Society of Information Theorists (CSIT)	Member	1999
Institute of Elec. and Electronics Engineers (IEEE)	Member Senior Member	1976–82 1983–present.

7 SCHOLARSHIPS, FELLOWSHIPS, HONORS, AND AWARDS

Year(s)	Amount	Source	Title
Oct. 2010		Faculty of Eng.	Commendation from the Chair on course evaluations
Dec. 2006		ICICT'06	Certificate of Appreciation from the 4 th IEEE Int. Conf. on Information & Comm. Technology (ICICT'06)
Dec. 2005		ICICT'06	Certificate of Appreciation from the 3 rd IEEE Int. Conf. on Information & Comm. Technology (ICICT'05)
2004		Faculty of Eng.	Faculty of Eng. Award for Teaching Excellence (http://www.engr.uvic.ca/teaching-award.php)
2003		Faculty of Eng.	Nominated for Faculty of Eng. Award for Teaching Excellence
Feb. 2003		Faculty of Eng.	Invited by Eng. Graduating Class to give a speech at their Graduation Banquet
Aug. 2002		Faculty of Eng.	Commendation from the Chair on my course evaluations
Dec. 2001		ISSPIT'01	Certificate of Appreciation from the 1 st IEEE Sym. on Signal Processing and Information Technology (ISSPIT'01)
Oct. 2001		Faculty of Eng.	Commendation from the Dean on course evaluations
June 2001		Faculty of Eng.	Commendation from the Chair on course evaluations
Sep. 1999		Faculty of Eng.	Commendation from the Dean on course evaluations
June 1999		Faculty of Eng.	Commendation from the Dean on course evaluations
Sep. 1998		Faculty of Eng.	Commendation from the Chair on course evaluations
Sep. 1986		Faculty of Eng.	Elected Best Teacher by undergraduate students
Apr. 1986		Faculty of Eng.	Commendation from President of Faculty Association on my Best Teacher Award

SCHOLARSHIPS, FELLOWSHIPS, HONORS, AND AWARDS (Continued)

Year(s)	Amount	Source	Title
Oct. 1985		Faculty of Eng.	Commendation from the Chair on course evaluations
Mar. 1985		Faculty of Eng.	Commendation from the Chair on my course evaluations
1976–1979	\$7000 (p.a.)	NSERC	Post Graduate Scholarship
1975–1979	\$3,000 (p.a.)	University of British Columbia	Research Assistantship
1974–1976	\$3,500 (p.a.)	University of British Columbia	President’s Award
1967–1974	L.E. 120 (p.a.)	Egyptian Government	Outstanding Student Academic Award

8 PUBLICATIONS

Publications Career Number:

Books	5
Chapters in Books	9
Refereed Journals	77
Refereed Conferences	162
Technical Reports	19

8.1 Books

1. F. Gebali, “Algorithms and Parallel Comp.s”, John Wiley, New York, 2011. Chinese Translation by Tsinghua University.
2. F. Gebali, “Algorithms and Parallel Comp.s”, John Wiley, New York, 2011.
3. F. Gebali, “Analysis of Comp. and Comm. Networks”, Springer-Verlag, New York, 2008.
4. F. Gebali, H. Elmiligi and M.W. El-Kharashi, “Networks-On-Chips: Theory and Practice”, CRC Press/ Taylor and Francis Group LLC, Boca Raton, Florida, 2008.
5. F. Gebali, “Comp. Comm. Networks: Analysis and Design, Third Edition”, Northstar Digital Design Inc., Victoria, 2005.

8.2 Chapters in Books

1. F. Gebali and T. Khattab, “Power-Aware MAC Protocol for Wireless Sensor Networks”, in *Wireless Sensor Networks and Energy Efficiency: Protocols, Routing and Management*, Eds. K. Ragab, A. B Abdullah and N. Zaman, IGI Global, 2011.
2. A. Morgan, H. Elmiligi, M. El-Kharashi, and F. Gebali, “Bio-inspired NoC Architecture Optimization”, in *Autonomic Networking-on-Chip: Bio-inspired Specification, Development, and Verification*, Ed. P. Cong-Vinh, CRC Press, 2010.
3. Y. Abdel-Hamid, F. Gebali and T.A. Gulliver, “Random Access and Contention Strategies in WiMAX”, in *WiMAX Network Planning and Optimization*, Ed. Y. Zhang, CRC Press, 2009, pp. 73–91.
4. M.W. El-Kharashi, F. Gebali and K.F. Li, “Stack dependency resolution for Java processors based on hardware folding and translation: A byte code processor analysis”, in *Java Microprocessors*, Ed. M. Wolczko and N. Vijaykrishnan, Kluwer, 2002.

5. H. Fattah and F. Gebali, "Analysis of frame-based fair queuing under self-similar traffic", in *High Performance Computing Sys. and Applications*, Eds. N.J. Dimopoulos and K.F. Li, Chap. 17, pp. 161–174, Kluwer, 2002.
6. M.W. El-Kharashi, F. Gebali and K.F. Li, "A new methodology for stack operation for Java microprocessors", in *High Performance Computing Sys. and Applications*, Eds. N.J. Dimopoulos and K.F. Li, Chapter 17, pp. 235–251, Kluwer, 2002.
7. H. Fattah, M.W. El-Kharashi and F. Gebali, "Frame-based fair queuing: A hardware design for ATM networks", in *High Performance Computing Sys. and Applications*, Eds. N.J. Dimopoulos and K.F. Li, Chap. 17, pp. 149–160, Kluwer, 2002.
8. F. Elguibaly, S. Sunder and A. Antoniou, "Systolic implementation of FIR filters", in *Signal Processing V: Theories and Applications*, (L. Torres, E. Masgrau, and M.A. Lagunas, Eds.). Amsterdam: Elsevier Science Publishers B.V., pp. 1423–1426, 1990.
9. K. Colbow and F. Elguibaly, "Theory and practice of CdSe semiconductor-electrolyte junction solar cells", in *Alternate Energy Sources*, Ed. T. N. Veziroglu, Amsterdam: Elsevier Science Publishers B.V., pp. 353–365, 1983.

8.3 Refereed J. Publications

1. **Haytham Elmiligi, Ahmed A. Morgan, M. Watheq El-Kharashi and Fayeze Gebali**, "Improving Networks-on-Chip performability: A topology-based approach", *International Journal of Circuit Theory and Applications*, vol. 39, pp. 557–572, 2011.
2. A. Ibrahim, F. Gebali, H. Elsimary, and A. Nassar, "New Processor Array Architecture for Scalable Radix 2 Montgomery Modular Multiplication Algorithm", *Canadian J. of Elec. and Comp. Eng.*, vol. 34, no. 4, pp. 152–157, 2010.
3. A. Amer and F. Gebali, "General Model for Infrastructure Multi-Channel Wireless LANs", *Int. J. of Comp. Networks and Comm. (IJCNC)*, vol. 2, no. 3, pp. 1-11, May 2010.
4. A. Ibrahim, F. Gebali, H. Elsimary, and A. Nassar, "Processor Array Architectures for Scalable Radix 4 Montgomery Modular Multiplication Algorithm", *IEEE Trans. of Parallel and Distributed Sys. (TPDS)*, accepted and second review complete, 2010.
5. H. Elmiligi, A. A. Morgan, M. W. El-Kharashi and F. Gebali, "Improving Networks-on-Chip Performability: A Topology-Based Approach", *Int. J. of Circuit Theory and Applications*, Wiley. volume 38, number 5, May, 2010.
6. A. Amer and F. Gebali, "General Model for Single and Multiple Channels WLANs with Quality of Service Support", *Int. J. of Wireless & Mobile Networks (IJWMN)*, vol. 1, no. 2, November, pp. 1–19, 2009.
7. H. Elmiligi, A.A. Morgan, M.W. El-Kharashi and F. Gebali, "Power Optimization for Application-Specific Networks-on-Chip: A Topology-Based Approach", *Microprocessors and MicroSys.*, volume 33, number 5–6, pp. 343–355, August, 2009

8. M. N. Marsono, M. W. El-Kharashi, and F. Gebali, "Spam rejection scheme during SMTP sessions based on layer-3 e-mail classification," *Elsevier J. of Network and Comp. Applications*, vol. 32, no. 1, pp. 236–257, January 2009.
9. M. N. Marsono, M. W. El-Kharashi, and F. Gebali, "Targeting Spam Control on Middle-boxes: Spam Detection Based on Layer-3 E-mail Content Classification," *Elsevier Comp. Net.*, vol. 53, no. 6, pp. 835–848, 2009.
10. M N. Marsono, M. Watheq El-Kharashi, and Fayeze Gebali, "Prioritized E-mail Servicing to Reduce Non-Spam Delay and Loss: A Performance Analysis" *Int. J. of Network Management*, volume18, pp. 325–344, 2008
11. E. Khan and M. W. El-Kharashi and F. Gebali and M. Abd-El-Barr, "Design Space Exploration of a Reconfigurable HMAC-Hash Unit", *J. of Research and Practice in Information Technology (JRPIT)*, vol. 40, no. 2, pp. 109–127, May, 2008.
12. M. N. Marsono and M. W. El-Kharashi and F. Gebali, "A Spam Rejection Scheme during SMTP Sessions based on Layer-3 E-mail Classification", *J. of Network and Comp. Applications*, vol. 32, no. 1, pp. 236–257, January, 2009.
13. H. Elmiligi, M. W. El-Kharashi and F. Gebali, "Queue Modeling and Implementation for Networks-on-Chip Routers", *J. of Circuits, Sys., and Comp.s*, vol. 16, no. 6, pp. 981–996, Dec, 2007.
14. E. Khan, M. W. El-Kharashi, F. Gebali, and M. Abd-El-Barr, "Design and Performance Analysis of a Reconfigurable, Unified HMAC-Hash Unit", *IEEE Trans. on Circuits and Sys. I*, vol. 54, no. 12, December, pp. 2683–2695, 2007. Corrections in vol. 55, no. 2, p. 708, Mar. 2008.
15. M. Marsono, F. Gebali, M.W. El-Kharashi, "Binary LNS-based naive Bays inference engine for spam control", *IET Proc. Comp. and Digital Techniques*, vol. 2, no. 1, pp. 56–62, 2008
16. A. Kaheel, H. Alnuweirie and F. Gebali, "A New Analytical Model for Computing Blocking Probability in Optical Burst Switching Networks", *IEEE J. of Selected Areas in Comm. (JSAC)*, vol. 24, no. 12, December 2006, pp. 120–128.
17. F. Gebali and A. Al-Sammak, "Performance Analysis of a Point Coordination Function in WLANs Using Collaborative Coding Modulation: Persistent Backoff Strategy", *IEE Proc.* Accepted October 2006.
18. F. Gebali, M. Rehan and M.W. El-Kharashi, "A Hierarchical Design Methodology for Full-Search Block Matching Motion Estimation", *Multidimensional Sys. and Signal Processing*, vol. 17, pp. 327–341, 2006.
19. E. Khan, M. W. El-Kharashi, F. Gebali, and M. Abd-El-Barr, "Applying handel-C design flow in designing an HMAC-has unit on FPGAs" *IEE Proc. Comp. and Digital Techniques*, vol. 153, no. 5, September 2006, pp. 323–334.

20. F. Gebali and A. Al-Sammak, "Performance of Collaborative Codes in CSMA/CD Environment", *European Trans. on TeleComm.*, vol. 17, no. 5, September/October 2006, pp. 525–531.
21. F. Gebali and A. Al-Sammak, "Modeling CSMA/CA Protocol for Wireless Channels that use Collaborative Codes Modulation", *IEE Proc.: Comm.*, vol. 153, no. 3, pp. 405–409, June 2006
22. A.N.M. Rafiq and F. Gebali, "Processor Array Architecture for Deep Packet Classification", *IEEE Trans. on Parallel and Distributed Sys.*, vol. 17, no. 3, pp. 241–252, March 2006.
23. F. Gebali and A. Al-Sammak, "Markov chain analysis of collaborative codes in random multi access Comm. Sys.", *Comp. Comm.*, vol. 28, no. 4, pp. 441–448, 2005.
24. A.N.M. Rafiq, M.W. El-Kharashi and F. Gebali, "A fast string search algorithm for deep packet classification", *Comp. Comm.*, vol. 27, no. 11, pp. 1524–1538, 2004.
25. M.W. El-Kharashi, F. Gebali, K.F. Li and F. Zhang, "The JAFARDD Processor: A Java architecture based on a folding algorithm, with reservation stations, dynamic translation, and dual processing", *IEEE Trans. on Consumer Electronics*, vol. 48, no. 4, November, pp. 1004–1015, 2002.
26. M.W. El-Kharashi and F. Gebali, "A robust stack folding approach for Java processors: An operand extraction-based algorithm", *J. of Sys. Architecture*, vol. 47, no. 8, pp. 697–726, 2001.
27. F. Elguibaly, "HCORDIC: A high-radix adaptive CORDIC algorithm", *Canadian J. on Elec. and Comp. Eng.*, vol. 25, no. 4, pp. 149–154, 2000.
28. F. Elguibaly, "Overflow handling in inner-product processors", *IEEE Trans. on Circuits and Sys. II: Analog and Digital Signal Processing*, vol. 47, no. 10, pp. 1086–1090, 2000.
29. F. Elguibaly, "A fast parallel multiplier-accumulator using the modified Booth algorithm", *IEEE Trans. on Circuits and Sys. II: Analog and Digital Signal Processing*, vol. 47, no. 9, pp. 902–908, 2000.
30. F. Elguibaly, "Merged inner-product processor using the modified Booth algorithm", *Canadian J. on Elec. and Comp. Eng.*, vol. 25, no. 4, 2000.
31. M.W. El-Kharashi, F. Elguibaly and K.F. Li, "Quantitative study of Java microprocessor architectural requirements. Part I: Instruction set design", *Microprocessors and MicroSys.*, vol. 24, no. 5, pp. 225–236, 2000.
32. M.W. El-Kharashi, F. Elguibaly and K.F. Li, "Quantitative study of Java microprocessor architectural requirements. Part II: High-level language support", *Microprocessors and MicroSys.*, vol. 24, no. 5, pp. 237–250, 2000.
33. A. Rayhan, F. Elguibaly and A. Almulhem, "Fault-tolerant ATM switch using logical neighborhood network", *Informatica*, vol. 23, pp. 325–334, 1999.

34. F. Elguibaly, " α -CORDIC: An adaptive CORDIC algorithm", *Can. J. Elec. and Comp. Eng.*, "vol. 23, pp. 133–138, 1998.
35. A. Sabaa, F. Elguibaly and D. Shpak, "Performance analysis of an improved selective repeat protocol for high-speed networks", *Can. J. Elec. & Comp. Eng.*, vol. 22, no. 1, pp. 29–36, 1997.
36. A. Sabaa, F. Elguibaly and D. Shpak, "Design and modeling of a non-blocking input-buffer ATM switch", *Can. J. Elec. & Comp. Eng.*, vol. 22, no. 3, pp. 87–93, 1997.
37. A. Tawfik, F. Elguibaly and P. Agathoklis, "New realization and implementation of fixed-point IIR digital filters", *J. of Circuits, Sys. and Comp.s*, vol. 7, no. 3, pp. 191–209, 1997.
38. E. Abdel-Raheem, F. Elguibaly and T. Yeap, "Design of 1-D and 2-D FIR digital filters and complex coefficients using a least-squares approach", *Comp.s and Elec. Eng.*, vol. 23, no. 4, pp. 273–281, 1997.
39. E. Abdel-Raheem, E., F. Elguibaly and A. Antoniou, "Design of low-delay two-channel FIR filter banks using constrained optimization approaches", *Signal Processing*, vol. 48, pp. 183–192, 1996.
40. F. Elguibaly and A. Tawfik, "Mapping 3-D IIR digital filters onto systolic arrays", *Multidimensional Signal Processing*, vol. 7, pp. 7–26, 1996.
41. S. Kidambi, S., F. Elguibaly and A. Antoniou, "Area-efficient multipliers for digital signal processing applications", *IEEE Trans. Circuits and Sys.*, vol. 43, pp. 90–95, 1996.
42. E. Abdel-Raheem, F. Elguibaly and T. Yeap, "A simple approach for the design of pseudo-QMF banks", *Can. J. Elec. & Comp. Eng.*, vol. 21, no. 4, pp. 153–157, 1996.
43. E. Abdel-Raheem, F. Elguibaly and A. Antoniou, "Weighted minimax design of FIR QMF banks: Results and comparisons", *Can. J. Elec. & Comp. Eng.*, vol. 21, no. 2, pp. 61–66, 1996.
44. S. Sunder, F. Elguibaly and A. Antoniou, "Two's complement fast serial-parallel multiplier", *IEE Pt. G.*, vol. 142, no. 1, pp. 41–44, 1995.
45. E. Abdel-Raheem, E., F. Elguibaly and A. Antoniou, "VLSI array processors for linear phase FIR filters", *Can. J. Elec. & Comp. Eng.*, vol. 20, no. 2, pp. 73–77, 1995.
46. A. Tawfik, F. Elguibaly and P. Agathoklis, "New low round-off noise realizations of second-order digital filter sections", *IEEE Trans. Signal Processing*, vol. 43, no. 5, pp. 1255–1258, 1995.
47. E. Abdel-Raheem, F. Elguibaly and A. Antoniou, "Efficient decimation and interpolator array structures", *J. Circuits, Sys. and Comp.s*, vol. 5 no. 2, pp. 215–218, 1995.
48. A. Tawfik, F. Elguibaly and P. Agathoklis, "Systolic implementation of fixed-point state-space digital filter", *IEE Proc.- Circuits, Devices and Sys.*, vol. 142, no. 3, pp. 193–199, 1995.

49. E. Abdel-Raheem, F. Elguibaly and A. Antoniou, "Design of low-delay FIR QMF banks using the Lagrange-multiplier Approach", *Electronics Letters*, vol. 30, no. 12, pp. 924–926, 1994.
50. S. Sunder, F. Elguibaly and A. Antoniou, "VLSI implementation of a second-order digital filter", *Can. J. Elec. & Comp. Eng.*, vol. 19, pp. 143–147, 1994.
51. A. Tawfik, F. Elguibaly, M. Fahmi, E. Abdel-Raheem and P. Agathoklis, "High-speed area-efficient inner-product processor", *Can. J. Elec. & Comp. Eng.*, vol. 19, pp. 187–191, 1994.
52. E. Abdel-Raheem, F. Elguibaly and A. Antoniou, "Systolic implementation of FIR decimators and interpolators", *IEE Proc., Circuits, Devices, and Sys.*, vol. 141, no. 6, pp. 489–492, 1994.
53. S. Sunder, F. Elguibaly and A. Antoniou, "Area-efficient diminished-1 multiplier for Fermat number theoretic transform", *IEE Proc., Part G*, vol. 140, pp. 211–215, 1993.
54. S. Sunder, F. Elguibaly and A. Antoniou, "Systolic implementation of digital filters", *Multi-dimensional Sys. and Signal Processing*, vol. 3, pp. 63–78, 1992.
55. V. Sreeram, F. Elguibaly and P. Agathoklis, "Systolic arrays for implementation of finite memory filters", *Int. J. of Electronics*, vol. 72, no. 1, pp. 37–44, Jan. 1992.
56. B.C. McKinney and F. Elguibaly, "VLSI design of an FFT processor network", *Integration*, vol. 8, no. 3, pp. 321–440, Mar. 1990.
57. F. Elguibaly, "Design and analysis of arbitration protocols", *IEEE Trans. on Comp.s*, vol. 38, no. 2, pp. 161–171, Feb. 1989.
58. F. Elguibaly, "Surface barrier junctions: majority and minority carrier currents", *J. Appl. Physics*, vol. 65, no. 3, pp. 1168–1175, Feb. 1989.
59. F. Elguibaly, "Surface barrier junctions: conversion efficiency and surface recombination", *J. Appl. Physics*, vol. 65, no. 3, pp. 1176–1182, Feb. 1989.
60. B.C. McKinney and F. Elguibaly, "A multiple-access pipeline architecture for digital signal processing", *IEEE Trans. on Comp.s*, vol. 37, no. 3, pp. 283–290, Mar. 1988.
61. F. Elguibaly, "Models for the bulk photovoltaic effect in ferroelectric crystals", *Can. J. Phys.*, vol. 66, pp. 649–654, Aug. 1988.
62. F. Elguibaly, "Information storage in ferroelectrics: Thermal fixing", *Can. J. Phys.*, vol. 66, pp. 655–658, Aug. 1988.
63. F. Elguibaly, "Information storage in ferroelectrics: Real-time monitoring of refractive devices", *Can. J. Phys.*, vol. 66, pp. 659–664, Aug. 1988.
64. F. Elguibaly and M.I. Elmasry, "Stick layout notation for MESFETS and refractory metal FETs", *VLSI Sys. Design*, vol. 7, no. 2, pp. 88–96, Feb. 1986.

65. Q. Wang, F. Elguibaly and V.K. Bhargava, "VLSI architecture of bit-serial quasicyclic encoders", *Electronics Letters*, vol. 22, no. 22, pp. 1170–1171, Oct. 1986.
66. F. Elguibaly, "Hologram writing in electro-optic materials with Gaussian illumination", *Ferroelectrics*, vol. 47, pp. 159–167, 1983.
67. A. MacKintosh, S. Wessel, F. Elguibaly and K. Colbow, "Cold pressed cadmium selenide photoanodes for electrochemical solar cells", *Solar Energy Materials*, vol. 9, pp.69–75, 1983.
68. F. Elguibaly and K. Colbow, "Current transport in semiconductor-electrolyte barriers: surface recombination and photovoltaic applications", *J. Appl. Phys.*, vol. 54, pp.6488–6491, 1983.
69. F. Elguibaly and K. Colbow, "Theory of photocurrent in semiconductor-electrolyte junction solar cells", *J. Appl. Phys.*, vol. 53, pp. 1737–1740, 1982.
70. F. Elguibaly, "Filtering properties of volume holograms", *Can. J. Phys.*, vol. 60, pp.1152–1154, 1982.
71. F. Elguibaly, "Hologram and image storage in photo-ferroelectrics", *Can. J. Phys.*, vol.60, pp.1510–1513, 1982.
72. F. Elguibaly and L. Young, "Optically induced light scattering and beam distortion in iron-doped lithium niobate", *Ferroelectrics*, vol. 46, pp. 201–208, 1982.
73. F. Elguibaly and K. Colbow, "Current-voltage characteristics of semiconductor-electrolyte junction solar cells", *Can. J. Phys.*, vol. 59, pp. 1682–1685, 1981.
74. F. Elguibaly, K. Colbow and B. Funt, "Voltage dependence of the dark and photocurrents in semiconductor-electrolyte junctions", *J. Appl. Phys.*, vol. 52, pp. 3480–3483, 1981.
75. F. Elguibaly and K. Colbow, "The superposition principle for semiconductor-electrolyte junction solar cells", *J. Appl. Phys.*, vol. 52, pp. 5247–5249, 1981.
76. F. Elguibaly and L. Young, "Influence of the envelope field on hologram storage in LiNbO₃", *Ferroelectrics*, vol. 27, pp. 251–253, 1980.
77. L. Young, M. Moharam, F. Elguibaly and E. Lun, "Hologram writing in lithium niobate: beam coupling and the bulk photovoltaic effect", *J. Appl. Phys.*, vol. 50, pp.4201–4207, 1979.

8.4 Refereed Conference Publications

1. F. Gebali and T. Al-Somani, "Finite Field Multiplication Using Reordered Normal Basis Multiplier" Sixth International Conference on Broadband and Wireless Computing, Communication and Applications. October 26–28, 2011, Barcelona, Spain.

2. **Haytham ELMiligi, Ahmed A. Morgan, M. Watheq El-Kharashi and Fayez Gebali**, “Modeling Networks-on-Chip Performability using a Topology-Based Approach”, Proc. of the IEEE Pacific Rim Conf. on Comm., Comp., and Signal Proc. (PACRIM’07), Victoria, B.C. Canada, Aug. 23–25, 2011.
3. F. Gebali, “Floating-Point Adaptive CORDIC (FPA-CORDIC) Algorithm for Elementary Function Caclulation” National Aerospace & Electronics Conference (NAECON 2011), Dayton, Ohio, 20–22 July, 2011.
4. F. Gebali, “Efficient Structures for Multirate Decimators”, National Aerospace & Electronics Conference (NAECON 2011), Dayton, Ohio, 20–22 July, 2011.
5. F. Gebali and T. Khattab, “DominoMAC: A Wireless Sensor Networks Medium Access Protocol”, Globcome Conference, 5-9 December, Houston USA. 2011.
6. **R. El-Ashry, R. El-Ashry ,M. Rehan, H. El-Kamchouchi and F. Gebali**, “Performance-Optimized FPGA Implementation for the Flexible Triangle Search Block-Based Motion Estimation Algorithm”, Canadian Conf. on Elec. and Comp. Eng. (CCECE 11), Niagara Falls, Ontario, May 8–11, 2011.
7. **A. Ibrahim, F. Gebali, H. Elsimary and A. Nassar**, “New Processor Array Architecture for Scalable Radix 8 Montgomery Modular Multiplication Algorithm”, Canadian Conf. on Elec. and Comp. Eng. (CCECE 11), Niagara Falls, Ontario, May 8–11, 2011.
8. A. A. Morgan, H. Elmiligi, M. W. El-Kharashi, and F. Gebali, Multi- objective optimization of NoC standard architectures using genetic algorithms, in Proceedings of the tenth IEEE International Symposium on Signal Processing and Information Technology (ISSPIT10), Luxor, Egypt, Dec. 15-18, 2010, pp. 85-90.
9. R. El-Ashry, M. Rehan and F. Gebali, “Performance-Optimized FPGA Implementation for The Flexible Triangle Search Block-Based Motion Estimation Algorithm”, 9th Int. Conf. on Comp. Sys. and App. (AICCSA 2011), Sharm El-Sheikh, Egypt, 27-30 June 2011.
10. A. Abdullah, L. Cai and F. Gebali, “Enhanced Busy-Tone-Assisted MAC Protocol for Wireless Ad Hoc Networks”, IEEE 72nd Vehicular Technology Conf. (VTC2010-Fall), 6–9 Sep 2010, Ottawa.
11. H. Elmiligi, A. A. Morgan, M.W. El-Kharashi, and F. Gebali, Networks-on-chip topology optimization subject to power, delay, and reliability constraints, in Proceedings of the 2010 IEEE International Symposium on Circuits and Systems (ISCAS10), Paris, France, May 30 - June 2, 2010, pp. 2354-2357.
12. A. A. Morgan, H. Elmiligi, M. W. El-Kharashi, and F. Gebali, Multi- objective optimization for networks-on-chip architectures using genetic algorithms, in Proceedings of the 2010 IEEE International Symposium on Circuits and Systems (ISCAS10), Paris, France, May 30 - June 2, 2010, pp. 3725-3728.
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120. E. Abdel-Raheem, F. Elguibaly and A. Antoniou, "VLSI array processors for linear-phase FIR filters", IEEE 28th Asilomar Conf. on Signals, Sys. & Comp.s, Pacific Grove, California, pp. 1036-1040, Oct. 31 - Nov. 2, 1994.
121. A. Tawfik, P. Agathoklis and F. Elguibaly, "New realization and implementation of IIR digital filters using residue feedback", IEEE 28th Asilomar Conf. on Signals, Sys. & Comp.s, Pacific Grove, California, pp. 167-171, October 31 - November 2, 1994.
122. A. Tawfik, P. Agathoklis and F. Elguibaly, "A tool for analyzing word-length effects in fixed-point digital filter implementations", Proc. IEEE Pacific Rim Conf. on Comm., Comp.s and Signal Processing, Victoria, pp. 116-119, May 1993.
123. E. Abdel-Raheem, F. Elguibaly and A. Antoniou, "QMF banks: design and implementation perspectives", Proc. IEEE Pacific Rim Conf. on Comm., Comp.s and Signal Processing, Victoria, pp. 354-357, May, 1993.
124. A. Tawfik, P. Agathoklis and F. Elguibaly, "New low round-off noise implementation of second-order digital filter sections with coefficients which are sum of power-of-two", 36th Midwest Sym. on Circuits and Sys., Detroit, pp. 272-275, August, 1993.
125. E. Abdel-Raheem, F. Elguibaly and A. Antoniou, "Systolic implementation of FIR decimators and interpolators", 36th Midwest Sym. on Circuits and Sys., Detroit, pp. 938-941, August 1993.
126. E. Abdel-Raheem, F. Elguibaly and A. Tawfik, "Systolic implementation of linear-phase FIR filters", Proc. Can. Conf. Elec. & Comp. Eng., Vancouver, B.C. pp. 680-683, Sept. 1993.
127. E. Abdel-Raheem, F. Elguibaly and A. Antoniou, "Systolic implementation of fractional decimators and interpolators", in Proc. Can. Conf. Elec. & Comp. Eng., Vancouver, B.C. pp. 692-695, Sept. 1993.
128. A. Tawfik, F. Elguibaly and P. Agathoklis, "Efficient systolic implementation of fixed-point state-space digital filter", Proc. Can. Conf. Elec. & Comp. Eng., Vancouver, B.C. pp. 39-42, Sept. 1993.
129. F. Elguibaly, A. Tawfik, E. Abdel-Raheem, M. Fahmi and W.-S. Lu, "2-D IIR filter architectures using computational geometry concepts", Can. Conf. on VLSI, Banff, pp. 7.22-7.27, Nov. 1993.
130. F. Elguibaly, "Synthesizing systolic arrays: An overview", **invited paper**, IEEE Intl. Conf. on Microelectronics, Dhahran, Saudi Arabia, pp. 321-324, Dec. 1993.
131. A. Tawfik, F. Elguibaly and P. Agathoklis, "A novel systolic implementation of fixed-point state-space digital filters", IEEE Intl. Conf. on Microelectronics, Dhahran, Saudi Arabia, pp. 177-180, Dec. 1993.
132. E. Abdel-Raheem, F. Elguibaly and A. Antoniou, "Novel systolic implementation of polyphase multirate filters", IEEE Intl. Conf. on Microelectronics, Dhahran, Saudi Arabia, pp. 193-196, Dec. 1993.

133. M.N. Fahmi, F. Elguibaly, E. Abdel-Raheem, A. Tawfik and D. Shpak, "Area-time efficient fixed-point multiplier-accumulators for inner-product computation", IEEE Intl. Conf. on Microelectronics, Dhahran, Saudi Arabia, pp. 189-192, Dec. 1993.
134. F. Elguibaly, A. Tawfik, E. Abdel-Raheem and M. Fahmi, "Systolic arrays for 2-D FIRs using a computational geometric approach", IEEE Intl. Conf. on Microelectronics, Dhahran, Saudi Arabia, pp. 185-188, Dec. 1993.
135. A. Al-Maleh, F. Elguibaly and V.K. Bhargava, "A comparison of one- and two dimensional vector quantization of images", Proc. IEEE Pacific Rim Conf. on Comm., Comp.s and Signal Processing, Victoria, pp. 490-493, May 1991.
136. S. Sunder, P.S.R. Diniz, F. Elguibaly and A. Antoniou, "Systolic structures for second-order recursive filters", Proc. Pacific Rim Conf. on Comm., Comp.s and Signal Processing, Victoria, pp. 514-517, May 1991.
137. F. Elguibaly, "Analysis of the CORDIC algorithm", Proc. First Cyprus Intl. Conf. Comp. Appl. to Eng. Sys., Nicosia, Cyprus, pp. 12-17, July 1991.
138. A. Al-Maleh, F. Elguibaly and V.K. Bhargava, "Improving the performance of one dimensional vector quantization using product structures", Proc. First Cyprus Intl. Conf. on Comp. Appl. to Eng. Sys., Nicosia, Cyprus, pp. 40-45, July 1991.
139. S. Sunder, F. Elguibaly and A. Antoniou, "Systolic implementation of two dimensional recursive digital filters", Proc. Int. Symp. Circuits and Sys., New Orleans, pp. 1034-1037, May 1990.
140. F. Elguibaly, S. Sunder and A. Antoniou, "Systolic implementation of FIR filters", Proc. V European Signal Processing Conf., Barcelona, Spain, pp. 1423-1426, Sept. 1990.
141. M.S. Tariq and F. Elguibaly, "Systolic array for successive over-relaxation of linear equations", Proc. IEEE Pacific Rim Conf. on Comm., Comp.s and Signal Processing, Victoria, pp. 48-51, June 1989.
142. G.B. Mund and F. Elguibaly, "A 2×2 switching element for broadband ISDN", Proc. IEEE Pacific Rim Conf. on Comm., Comp.s and Signal Processing, Victoria, pp. 620-623, June 1989.
143. M.S. Tariq and F. Elguibaly, "Systolic array for solving linear equations", Proc. Can. Conf. on Elec. and Comp. Eng., Montreal, pp. 533-536, Sept. 1989.
144. S. Sunder, F. Elguibaly and A. Antoniou, "Implementation of 2-D FIR filters using systolic arrays", Proc. Can. Conf. on Elec. and Comp. Eng., Montreal, pp. 658-661, Sept. 1989.
145. V. Sreeram, F. Elguibaly and P. Agathoklis, "Systolic arrays for implementation of finite memory filters", Proc. Can. Conf. on Elec. and Comp. Eng., Montreal, pp. 662-665, Sept. 1989.

146. F. Elguibaly and M.S. Tariq, "Spectral decomposition of matrices using systolic arrays", Proc. Can. Conf. on Very Large Scale Integration, Vancouver, pp. 25-32, Oct. 89.
147. F. Elguibaly, "Matrix triangularization using Givens rotations", Proc. Can. Conf. on Elec. and Comp. Eng., Vancouver, pp. 525-528, Nov. 1988.
148. F. Elguibaly, "Contention resolving protocols for digital Sys.", Proc. IEEE Pacific Rim Conf. on Comm., Comp.s and Signal Processing, Victoria, pp. 51-54, June 1987.
149. F. Elguibaly and B. McKinney, "A flexible pipeline architecture for digital signal processors", Proc. IEEE Pacific Rim Conf. on Comm., Comp.s and Signal Processing, Victoria, pp. 370-373, June 1987.
150. P. Aubry and F. Elguibaly, "A VLSI design of a character recognition algorithm", Proc. IEEE Pacific Rim Conf. on Comm., Comp.s and Signal Processing, Victoria, pp. 521-523, June 1987.
151. P. Aubry, and F. Elguibaly, "Testable systolic array for character recognition", Proc. IEEE Midwest Sym. on Circuits and Sys., Syracuse, pp. 105-108, Aug. 1987.
152. F. Elguibaly, "Processor bus access delay in rotating priority multiprocessor Sys.", Proc. Can. Conf. on Very Large Scale Integration, Winnipeg, pp. 223-228, Oct. 1987.
153. F. Elguibaly, "A general model for surface junction solar cells", Proc. IEEE INTELEC, Toronto, pp. 491-498, Oct. 1986.
154. F. Elguibaly, "Fair arbitration protocols for multiprocessors", Proc. IEEE 28th Midwest Symp. on Circuits and Sys., Louisville, KT, pp. 249-252, Aug. 1985.
155. F. Elguibaly, "Fair arbitration protocols for Comm. networks", Proc. IEEE Electronicom, Toronto, pp. 286-288, Oct. 1985.
156. F. Elguibaly, "Electro-optic materials for data storage and processing", Proc. IEEE Electronicom, Toronto, pp. 36-39, Oct. 1985.
157. F. Elguibaly, "Potential of silicon MESFET technology for VLSI", Proc. IEEE Electronicom, Toronto, pp. 586-589, Oct. 1985.
158. McKinney, B. and F. Elguibaly, "A Fourier transform algorithm and VLSI implementation", Proc. IEEE Electronicom, Toronto, pp. 658-661, Oct. 1985.
159. F. Elguibaly, "Si-MESFETs for low-voltage ICs", Proc. Can. Conf. on Very Large Scale Integration, Toronto, pp. 146-151, Nov. 1985.
160. McKinney, B.C. and F. Elguibaly, "A pipelined complex number multiplier for VLSI implementation in CMOS", Can. Conf. on VLSI, Toronto, pp. 34-37, Nov. 4-5, 1985.
161. Colbow, K., F. Elguibaly and B. Funt, "The superposition principle for semiconductor-electrolyte junction solar cells", Proc. Int. Union Pure and Applied Chemists 28th Congress, Vancouver, 1981.

162. F. Elguibaly and L. Young, "Influence of the envelope field on hologram storage in LiNbO₃", Proc. IEEE Int. Symp. On Applied Ferroelectrics, Minneapolis, MN, 1979, also in Ferroelectrics, vol. 27, pp. 251-253, 1980.

8.5 Technical Reports

1. F. Elguibaly and M.I. Elmasry. "A MESFET model for circuit analysis", University of Waterloo Elec. Eng. Technical Report P8118-4, 20 pages, 1985.
2. F. Elguibaly and M.I. Elmasry. "N-channel MESFET implementation", University of Waterloo Elec. Eng. Technical Report P8118-5, 40 pages, 1985.
3. F. Elguibaly and M.I. Elmasry, "Compatibility of Si-MESFET with bipolar and CMOS Technologies", University of Waterloo Elec. Eng. Technical Report P8118-6, 11 pages, 1985.
4. F. Elguibaly and M.I. Elmasry, "Stick layout notation for MESFETs and refractory metal FETs", University of Waterloo Elec. Eng. Technical Report P8118-7, 19 pages, 1985.
5. F. Elguibaly, "Si-MESFETs for low-voltage ICs" University of Waterloo Elec. Eng. Technical Report P8118-8, 6 pages, 1985.
6. F. Elguibaly, "Potential of silicon MESFET technology for VLSI", University of Waterloo Elec. Eng. Technical Report P8118-9, 4 pages, 1985.
7. B.C. McKinney and F. Elguibaly., "VLSI design of an FFT processing node", UVic Elec. Eng. Report 86-1, 243 pages, 1986.
8. F. Elguibaly, "A model for surface junction solar cells", UVic Elec. Eng. Report 86-3, 48 pages, 1986.
9. B.C. McKinney and F. Elguibaly, "VLSI design of an FFT processor network", UVic Elec. Eng. Report 86-4, 39 pages, 1986.
10. F. Elguibaly, "Design and analysis of arbitration protocols", UVic Elec. Eng. Report 86-5, 53 pages, 1986.
11. F. Elguibaly, "A high-speed, area-efficient parallel multiplier", Invited talk at Canadian Microelectronics Corporation, Annual Meeting June 15-19, 1987, Kingston, Ontario.
12. F. Elguibaly, "Systolic processing element: 1", for Pacific Microelectronic Centre, Vancouver, B.C., 18 pp., 1990.
13. F. Elguibaly, "Systolic processing element: 1.1", for Pacific Microelectronic Centre, Vancouver, B.C., 15 pp., 1990.
14. F. Elguibaly, "Systolic processing element: 1.2", for Pacific Microelectronic Centre, Vancouver, B.C., 15 pp., 1990.

15. F. Elguibaly, "Systolic processing element: 1.3", for Pacific Microelectronic Centre, Vancouver, B.C., 19 pp., 1990.
16. F. Elguibaly, "Systolic processing element: 1.4", for Pacific Microelectronic Centre, Vancouver, B.C., 13 pp., 1990.
17. F. Elguibaly, "Systolic processing element: 1.5", for Pacific Microelectronic Centre, Vancouver, B.C., 16 pp., 1990.
18. F. Elguibaly, "First progress report", for Pacific Microelectronics Centre, Vancouver, B.C., 4 pp., 1990.
19. F. Elguibaly, "Second progress report", for Pacific Microelectronics Centre, Vancouver, B.C., 4 pp., 1990.

9 POST DOCTORAL, GRADUATE, & UNDERGRADUATE STUDENT SUPERVISION

Career Number:

	Post Doc.	PhD	MSc	MEng	Undergrad
Completed Degrees	3	17	17	3	10
In-Progress Degrees	1	2	0	2	0

9.1 Doctoral Fellow Supervised

1. Dalia El-Dib, 2008– 2009
2. Newaz Rafiq, 2006–2007
3. M. Watheq El-Kharashi, 2006

9.2 PhD Students Graduated

1. Khalid Khayyat, “Performance Modelling and QoS Support for Wireless Ad Hoc Networks”, PhD thesis, Department of Elec. and Comp. Eng., University of Victoria, 106 pages, June 2011.
2. Haytham El Milgi, “Networks-on-Chip: Modeling, Analysis, and Design Methodologies”, PhD thesis, Department of Elec. and Comp. Eng., University of Victoria, 106 pages, March 2011.
3. Ahmed Morgan, “Networks-on-Chip: Modeling, System-Level Abstraction, and Application-Specific Architecture Customization”, PhD thesis, Department of Elec. and Comp. Eng., University of Victoria, 106 pages, March 2011.
4. Abdelsalam Amer, “Quality of Service Support with Error Control Protocol in Wireless Local Area Networks”, PhD thesis, Department of Elec. and Comp. Eng., University of Victoria, 130 pages, June 2010.
5. Atef Ibrahim, “Design and VLSI Implementation of a Fast Modular Multiplier Architecture for CryptoSys.”, PhD thesis, Department of Electronics, Cairo University, 180 pages, May 2010.
6. Muhammad Marsono, “Towards Improving E-Mail Content Classification for Spam Control: Architecture, Abstractions, and Strategies”, PhD thesis, Department of Elec. and Comp. Eng., University of Victoria, 162 pages, August 2007.

7. Mohamed Fayed , “A Security Coprocessor for Next Generation IP Telephony: Architecture, Abstraction, and Strategies”, PhD thesis, Department of Elec. and Comp. Eng., University of Victoria, 201 pages, August 2007.
8. Newaz Rafiq, “Sequential and Parallel Algorithms for Network Packet Classification”, PhD thesis, Department of Elec. and Comp. Eng., University of Victoria, 209 pages, August 2006.
9. Esam Khan, “Design and Performance Analysis of a Reconfigurable, Unified Hash Unit for IPSec Authentication”, PhD thesis, Department of Elec. and Comp. Eng., University of Victoria, 120 pages, November 2005.
10. Tarek Nasser, “The Virtual Frame Algorithm: A New Scheduling Technique for Integrated Services in Packet Switching Networks”, PhD thesis, Department of Elec. and Comp. Eng., University of Victoria, 120 pages, January 2003.
11. Mohamed W. El-Kharashi “The JAFARDD Processor: A Java Architecture Based on a Folding Algorithm, with Reservation Stations, Dynamic Translation and Dual Processing” PhD thesis, Department of Elec. and Comp. Eng., University of Victoria, 160 pages, November 2002.
12. M. Wedlake, ”The Newtonian architecture for virtual landscapes: An architecture, model and implementation”, PhD Thesis, Department of Elec. and Comp. Eng., University of Victoria, 159 pages, Aug. 1999.
13. A. Sabaa, ”Switching and error recovery in terabit ATM networks”, PhD Thesis, Department of Elec. and Comp. Eng., University of Victoria, 133 pages, November 1998.
14. A. Almulhem, ”Error correction techniques for ATM Comm.”, PhD Thesis, Department of Elec. and Comp. Eng., University of Victoria, 112 pages, Sep. 1998.
15. A. Tawfik, “Realization and implementation of state-space IIR digital filters”, PhD Thesis, Dept. of Elec. & Comp. Eng., University of Victoria, 166 pages, September 1995.
16. E. Abdel-Raheem, “Design and VLSI implementation of multirate filter banks”, PhD Thesis, Dept. of Elec. & Comp. Eng., University of Victoria, 169 pages, September 1995.
17. S. Kidambi, “VLSI implementation of digital filters,” PhD Thesis, Dept. of Elec. & Comp. Eng., University of Victoria, 120 pages, April 1992.

9.3 MASC Students Graduated

1. Abdullah Taha, Comparative Implementation of Baugh-Wooley and Modified Booth Multiplication Algorithms, 2009
2. Abdul-Elah Al-Sanad, “Phi-MAC: An Energy-Aware Multi-Phase MAC Protocol for Wireless Sensor Networks” MSc thesis, Department of Elec. and Comp. Eng., University of Victoria, 78 pages, June 2005.

3. Mohamed Fayed, "Evaluating the Performance of the Hierarchical Parallel Scheduler (HPS) Using OPNET Simulation" MSthesis, Department of Elec. and Comp. Eng., University of Victoria, 120 pages, December 2002.
4. Anjum Shaikh, "VLSI Design of Improved Logical Neighborhood Network" MSthesis, Department of Elec. and Comp. Eng., University of Victoria, 90 pages, May 2002.
5. D. Arora, "Performance analysis of virtual routing and queuing (VRQ) switch", MSthesis, Department of Elec. and Comp. Eng., University of Victoria, 120 pages, December 2001.
6. H. Fattah, "Frame-based fair queuing: Analysis and design", MSthesis, Department of Elec. and Comp. Eng., University of Victoria, 111 pages, July 2000.
7. O. Mohamed, "ILN switching element design and performance measure", MScThesis, Department of Elec. and Comp. Eng., University of Victoria, 82 pages, January 2000.
8. S. Agarwal, "Design and performance evaluation of a new ATM switch", MScThesis, Department of Elec. and Comp. Eng., University of Victoria, 118 pages, December 1998.
9. M. El-Nour, "Media access and error control protocols for wireless ATM", MASc Thesis, Department of Elec. and Comp. Eng., University of Victoria, 67 pages, Dec. 1997.
10. A. Al-Sawi, "HCORDIC: A high-performance CORDIC algorithm", MSc Thesis, Comp. Eng. Department, King Fahd University & Petroleum and Minerals, 129 pages, Dec. 1996.
11. J. Gilderson, "VHDL design of an ATM switch", MScThesis, Dept. of Elec. & Comp. Eng., University of Victoria, 150 pages, December 1995.
12. M. Fahmi, "Inner-product processor design for DSP", M.A. Sc. Thesis, Dept. of Elec. & Comp. Eng., University of Victoria, 80 pages, September 1994.
13. G. Mund, "Switching element design for BISDN," expected MScThesis, Dept. of Elec. & Comp. Eng., University of Victoria, 100 pages, September 1992.
14. A. El-Maleh, "Image compression using one-dimensional vector quantization", MASc Thesis, Dept. of Elec. & Comp. Eng., University of Victoria, 104 pages, Sept. 1991.
15. M.S. Tariq, "Systolic Array design and VLSI implementation for a matrix algebra engine", MScThesis, Dept. of Elec. & Comp. Eng., University of Victoria, 150 pages, Sept. 1990.
16. P. Aubry, "VLSI design of a testable processor array for feature extraction", MASc Thesis, Dept. of Elec. & Comp. Eng., University of Victoria, 103 pages, May 1988.
17. B.C. McKinney, "The VLSI design of a general purpose FFT processing node", MASc Thesis, Dept. of Elec. Eng., University of Victoria, 243 pages, January 1986.

9.4 MEng Students Graduated

1. Abdullah Taha, “Comparative Implementation of Baugh-Wooley and Modified Booth Multiplication Algorithms”, MEng report, Department of Elec. and Comp. Eng., University of Victoria, August 2009.
2. Lamia Hanosh, “The Bluetooth Wireless Technology Architecture and Operation ”, MEng report, Department of Elec. and Comp. Eng., University of Victoria, September 2005.
3. Saleh Arhim, “Linear Programming Applications in Networking” MEng report, Department of Elec. and Comp. Eng., University of Victoria, 90 pages, July 2002.

9.5 Senior Undergraduate Project Supervision

- 1.
2. James van Oort, Farzad Khosrow-Khaver, and Boubacar Diallo, “Automatic Temperature Control”, 2002.
3. William Wu, Tony Lin, David Hsu, and Jeremy Chang, “Digital Capacitance Meter”, 2002.
4. Shane Robinson, Trevor Stoker, Andy Green, and Rohin Naveena-Chandran, “Ultrasonic Fuel Sender”, 2002.
5. Demos Roussinos, Alexis Eller, and Shane Doran, “PPP/SDH Framer”, 2001.
6. Raj Atwal, Agatha Mutooni, and Mike MacGillis, “Design of a High-Speed Multiport Memory for a Network Switch” Multiport Memory”, 2001.
7. James van Oort and Gerald Davyduke, “Programmable Ignition Control”, 2001.
8. Jennifer Marston and Victoria Read, “Design and Synthesis of a Switch Routing Table”, 2000.
9. Shaun Watkins, “ATM Theory and Architectural Review”, 1999.
10. Steven Pridie and Patrick Bailey, “Content Addressable Memory Design”, 1999.

9.6 Past Doctoral Fellow Currently Supervised

1. Haytham El Miligi, 2010–

9.7 PhD Students Currently Supervised

1. Ahmed Abdullah, started 2005 (Co-supervised with Dr. Lin Cai)
2. Yousry Abdel-Hamid, started 2004

9.8 Master's Students Currently Supervised

MASC Students

1. Amr Nabil (Co-supervised with Dr. M. Khedr , Naval Academy, Egypt)

MEng Students

1. Ali Nia, 2010
2. Amro Alhosainy , 2010

9.9 Other Related Activities (Member of supervisory committee, chairman of examination committee, external examiner)

Year(s)	Student	Degree Program	
2011	Hani Balkhair	External Examiner	MASc
2011	Audrey LePioufle	Chair of Examination Committee	MSc
2011	Hanyu Zhang	Chair of Examination Committee	MSc
2010	S. Carruthers	Chair of Examination Committee	MSc
2010	A. Esty	Chair of Examination Committee	MSc
2010	D. Sengupta	External Examiner	PhD
2010	Ng Cheng Kuan	External Examiner	PhD
2009	C. Dawson	Chair, Supervisory Committee	MA
2007	C. Budakoglu	Supervisory Committee	PhD
2007	C.M. Da Silva	Chair, Examining Committee	MSc
2006	E. Sorouch	Supervisory Committee	MSc
2006	S. Sasankan	Supervisory Committee	MSc
2006	A. Abubakr	Supervisory Committee	PhD
2005	B. Sayed	Supervisory Committee	MSc
2005	K. Al-Muzaini	Supervisory Committee	PhD
2004	H. Chen	Chair, Examining Committee	
2004	M. H. Jayeh	External Examiner	MSc
2003	B. Moa	Supervisory Committee	PhD
2003	P. Sharma	Supervisory Committee	MSc
2003	S. Y. Shi	Supervisory Committee	MSc
2003	S. Khan	Supervisory Committee	PhD
2003	J. X. Zhu	Chair, Examining Committee	MSc
2003	A. Ahmed	Supervisory Committee	PhD
2003	O. Keskin	Chair, Examining Committee	MSc
2003	S. Shelford	Chair, Examining Committee	MSc
2003	A. Almulhem	Supervisory Committee	PhD
2002	J. Wang	Chair, Examining Committee	MSc
2002	H. B. Fan	Supervisory Committee	PhD
2002	N. Carson	Supervisory Committee	MSc
2001	J. Park	Supervisory Committee	MSc
2001	R. Mikhael	Supervisory Committee	MSc
2000	J. Pu	Supervisory Committee	PhD
2000	W.-S. Cheung	Chair, Examining Committee	MSc
2000	M. S. Abdallah	External Examiner	MSc
1999	H.-H. Jeon	Supervisory Committee	PhD
1999	A. Bergen	Chair, Examining Committee	MSc
1999	C. Heo	Supervisory Committee	MSc

Other Related Activities (Continued)

Year(s)	Student	Degree Program	
1999	J. Clem	Supervisory Committee	MSc
1999	L. Monterubbio	Supervisory Committee	PhD
1999	T. Berning	Supervisory Committee	PhD
1998	R. Moar	External Examiner	MSc
1998	J. M. Roberts	Chair, Examining Committee	MSc
1998	R. Gurunathan	Supervisory Committee	PhD
1998	M. White	Supervisory Committee	PhD
1995	M. Milroy	Supervisory Committee	MSc
1995	M. Rehan	Supervisory Committee	PhD
1994	R. MacDonald	External Examiner	MSc
1993	R. Byrne	Chair, Examining Committee	PhD
1993	A. Bhunia	Supervisory Committee	MSc
1993	M. Lister	Chair, Examining Committee	MSc
1993	S. Subramanian	Supervisory Committee	PhD
1993	S. Neville	Supervisory Committee	PhD
1993	S. A. Jazayeri	Chair, Examining Committee	PhD
1992	B. Prescott	Supervisory Committee	MSc
1992	D. Pifko	Supervisory Committee	MSc
1992	J. Chana	Supervisory Committee	MSc
1992	J. Vincent	Supervisory Committee	MSc
1992	H. Ibrahim	Chair, Examining Committee	MSc
1992	L. Chen	Supervisory Committee	PhD
1992	E. Kontopidi	External Examiner	PhD
1992	J. Smith	Supervisory Committee	MSc
1992	A. Srinivasan	Supervisory Committee	PhD
1992	S. Radhakrishnan	Supervisory Committee	PhD
1992	M. Escalante	Supervisory Committee	PhD
1992	R. Howell	Supervisory Committee	PhD
1992	V. Belaguli	Supervisory Committee	PhD
1992	David Peterson	Supervisory Committee	PhD
1997	D. Lyder	Chair, Examining Committee	PhD
1997	A. Hafez	Supervisory Committee	MSc
1997	G. Kaimani	Supervisory Committee	PhD
1991	Fayaz Kadri	Supervisory Committee	MSc
1991	Rex Andrew	Supervisory Committee	PhD
1991	Shinhou Liu	Supervisory Committee	PhD
1991	Ying Cui	Supervisory Committee	PhD
1991	Jialin Zou	Supervisory Committee	PhD
1991	Grant Marven	Supervisory Committee	MSc
1990	Anand Srinivasan	Supervisory Committee	MSc
1990	Xiaoling Sun	Supervisory Committee	PhD

Other Related Activities (Continued)

Year(s)	Student	Degree Program	
1990	Anwarul Hasan	Supervisory Committee	PhD
1989	Joel McGregor	Supervisory Committee	PhD
1989	Jing Yuan	Supervisory Committee	PhD
1989	C.-L. Shi	Supervisory Committee	PhD
1989	Peter Walsh	Supervisory Committee	PhD
1989	Colin Woytowich	Supervisory Committee	MSc
1988	Olaf Dravnieks	Supervisory Committee	MSc
1987	Manique Mata	Supervisory Committee	PhD
1987	Darren L. Henning	Supervisory Committee	MS.
1987	Xinghua Pu	Supervisory Committee	PhD
1987	A Mohamed Ibrahim	Supervisory Committee	PhD
1986	Robert Aitken	External Examiner	MS.
1986	Yude Gao	External Examiner	MSc
1986	Mahesh Swamy	Supervisory Committee	PhD
1986	Qing Zhao	Supervisory Committee	MSc
1986	Rodrigue Bryne	Supervisory Committee	MSc
1985	Mohamed Faci	External Examiner	MSc

10 GRANTS AND FUNDING FROM ALL AGENCIES INCLUDING UNIVERSITY OF VICTORIA

c

10.1 Grants (e.g. NSERC, SHRC, etc.)

Year(s)	Amount	Source	Title
2011	\$33,000/pa	NSERC	Parallel Algorithms
2011	\$896,573	CFI	Embedded Systems Canada (Dr. Dimopolous PI)
2010	\$1,050	UVic	Travel Grant
2009	\$514,000	Qatar National Research Program (QNRP)	WMBSN: Wireless Multicore Body Sensor Networks (applied for)
2008	\$375,800	Government of Qatar National Priorities Research Program (NPRP)	Energy-Efficient Wireless Sensor Networks: A Cooperative Design Perspective (Dr. Tamer Khattab principal investigator)
2007	\$5,000	Canadian Microelectronics Corporation	Celoxica (Handel-C) software
	\$134,395	Canadian Microelectronics Corporation	Equipment Grant (FPGA development boards and IBM host/design PC's)
	\$3,000	NSERC Design Chair	Curriculum Development Grant
	\$1,050	UVic	Travel Grant
2006	\$10,000	Canadian Microelectronics Corporation	Equipment Grant (FPGA development board and IBM host/design PC)
2005–2010	\$22,000	NSERC	Discovery grant
	\$1,050	UVic	Travel Grant
2004	\$100,000	Canadian Microelectronics Corporation	Equipment grant (Dr. D.M. Miller principal applicant)
	\$1,258	University of Victoria	Personal Comp. Acquisition
	\$750	University of Victoria	UVic IRG Top-Up Award
	\$1,050	UVic	Travel Grant
2003	\$15,000	Faculty of Eng.	Wighton Award for Sys. on chip lab development
	\$23,000	NSERC	Discovery
	\$1,200	UVic	Faculty research
	\$1,048	UVic	Travel Grant

Grants (e.g. NSERC, SHRC, etc.) Cont.

Year(s)	Amount	Source	Title
2002	\$23,000	NSERC	Discovery
	\$1,200	UVic	Faculty research
	\$300	UVic	Travel Grant
2001	\$10,000	ASI	CRD: Design of traffic scheduler for ATM switches
	\$23,000	NSERC	Discovery
	\$20,000	PMC-Sierra	Industrial support
	\$1,200	UVic	Faculty research
	\$1,750	UVic	Comp. acquisition
2000	\$20,000	ASI	CRD: Design of traffic scheduler for ATM switches
	\$20,000	PMC-Sierra	Industrial support
	\$1,200	UVic	Faculty research
1999	\$1,107,604	CFI	SuperComp. (Dr. Dimopoulos)
	\$89,330	CMC	Equipment (Group)
	\$22,464	NSERC	Operating
	\$1,100	UVic	Faculty research
1998	\$51,664	CMC	Equipment (Group)
	\$38,000	Micronet	Digital Comm. hardware design
	\$20,000	NRC	IRAP/MART: Inner product processor
	\$15,000	NRC	IRAP/MART: HCORDIC algorithm
	\$22,500	NSERC	operating
	\$20,000	PMC-Sierra	Industrial support
	\$1,200	UVic	Faculty research
1997	\$17,400	ASI	High-power DC-to-DC converter (Dr. A.K.S. Bhat)
	\$29,200	Micronet	ATM design
	\$25,000	Micronet	Digital signal processing
	\$22,500	NSERC	operating
	\$15,000	PMC-Sierra	Industrial support
	\$1,200	UVic	Faculty research
	\$7,000	Xantrex	High-power DC-to-DC converter (Dr. A.K.S. Bhat)

Grants (e.g. NSERC, SHRC, etc.) Cont.

Year(s)	Amount	Source	Title
1996	\$22,160	ASI	High-power DC-to-DC converter (Dr. A.K.S. Bhat)
	\$25,500	Micronet	ATM design
	\$22,500	NSERC	operating
	\$15,000	PMC-Sierra	Industrial support
	\$1,100	UVic	Faculty research
	\$950	UVic	Travel
	\$8,000	Xantrex	High-power DC-to-DC converter (Dr. A.K.S. Bhat)
1995	\$85,101	CMC	Equipment (Group)
	\$25,500	Micronet	ATM design
	\$16,700	Micronet	Digital signal processing
	\$22,500	NSERC	operating
	\$15,000	PMC-Sierra	Industrial support
	\$1,100	UVic	Faculty research
	\$950	UVic	Travel
1994	\$47,000	CMC	Equipment
	\$20,000	Micronet	Digital signal processing hardware
	\$25,500	Micronet	ATM design
	\$130,090	NSERC	Equipment (Dr. Antoniou)
	\$22,464	NSERC	Operating
	\$10,000	PMC-Sierra	Industrial support
1993	\$69,248	CMC	Equipment (Group)
	\$30,000	Micronet	Multirate digital signal processing
	\$17,500	Micronet	Mapping parallel algorithms
	\$18,700	NSERC	Operating
	\$20,916	NSERC	Equipment (Dr. Dimopoulos)
	\$10,000	PMC-Sierra	Industrial support
	\$1,200	UVic	Faculty research

Grants (e.g. NSERC, SHRC, etc.) Cont.

Year(s)	Amount	Source	Title
1992	\$85,270	CMC	Equipment (Group)
	\$18,225	Micronet	Multirate digital signal processing
	\$18,000	Micronet	Mapping parallel algorithms
	\$18,700	NSERC	Operating
	\$140,807	NSERC	Equipment (Dr. Antoniou)
	\$10,000	PMC-Sierra	Industrial support
	\$1,200	UVic	Faculty research
1991	\$290,324	CMC	Workstations (Group)
	\$18,700	NSERC	Operating
	\$10,000	PMC-Sierra	Industrial support
	\$1,100	UVic	Faculty research
	\$1,575	UVic	Travel
	\$1,500	UVic	Travel
	\$4,500	UVic	Allocation from contract overhead
1990	\$200,000	CMC	Workstations (Group)
	\$17,099	Micronet	Multirate digital signal processing
	\$18,700	NSERC	Operating
	\$10,000	PMC-Sierra	Industrial support
	\$19,379	UVic	Allocation from contract overhead
	\$1,400	UVic	Faculty research
	\$1,500	UVic	Travel
1990–1996	\$1,465,777	Canadian Space Agency	The radio-astron project (Dr. P. Dewdney)
1989	\$215,000	CMC	Chip tester (Group)
	\$50,000	IBM	Workstation donation
	\$18,700	NSERC	Operating
	\$1,460	UVic	Faculty research
1989	\$150,000	PMC/Canadian Space Agency	32-bit floating point systolic processor development

10.2 Research Contracts

Year(s)	Amount	Source	Title
1988	\$7,400	ASI	Visiting fellow
	\$220,000	CMC	Equipment
	\$62,270	NSERC	Equipment (Group)
	\$22,041	NSERC	Equipment (Group)
	\$18,700	NSERC	Operating
	\$1,500	UVic	Faculty research
	\$554	UVic	Travel
	\$4,498	EDT Mfg. Ltd.	Feasibility of integrating SonoLite using digital design
1987	\$200,000	CMC	Equipment
	\$930	CMC	Travel
	\$17,472	NSERC	Operating
	\$1,066	UVic	Travel
	\$150	UVic	Graduate student travel
	\$1,240	UVic	Faculty research
	\$5,500	UVic	Personal Comp. acquisition
1986	\$18,200	NSERC	Operating
	\$500	UVic	Travel
	\$1,425	UVic	Faculty research
1985	\$18,200	NSERC	Operating
	\$740	UVic	Travel
	\$100	UVic	Graduate student travel
	\$1,630	UVic	Faculty research
1984	\$25,000	UVic	President's startup grant
	\$2,200	UVic	Faculty research

11 TEACHING DUTIES AT UNIVERSITY OF VICTORIA

11.1 Courses Taught

Bold-type courses are ones that were developed by Dr. Gebali and their year of first offering.

Year	Course	Hours/Week	Term	Students
2011	CENG 241 (Section A01)	3	May–Aug	76
	CENG 441 (Section A01)	3	May–Aug	33
	ELEC 543 (Section A01)	3	May–Aug	7
2010	CENG 241 (Section A01)	3	May–Aug	53
	CENG 441 (Section A01)	3	May–Aug	37
2009	CENG 241 (Section A01)	3	May–Aug	54
	CENG 441 (Section A01)	3	May–Aug	35
	ELEC 543 (Section A01)	3	May–Aug	4
2008	CENG 460 (Section A01)	3	Sep–Dec	26
	CENG 460 (Section A02)	3	Sep–Dec	2

Courses Taught at Kuwait University, Information Science Department - Kuwait during Administrative Leave.

Year	Course	Hours/Week	Term	Students
2008	ETM 450	3	Feb–June	17
	ISC 100	3	Feb–June	25
	ISC 101	3	Feb–June	25
	ISC 340	3	Feb–June	25
2007	ISC 101	3	Sep–Jan	27
	ISC 101	3	Sep–Jan	25
	ISC 357	3	Sep–Jan	25

Courses Taught at University of Victoria, Elec. & Comp. Eng. Department.

Year	Course	Hours/Week	Term	Students
2007	ELEC 360	3	Jan–Apr	22
	CENG 441	3	May–Aug	32
	ELEC 543	3	May–Aug	3
2006	CENG 441	3	May–Aug	52
2005	CENG 461	3	Jan–Apr	15
	ELEC 514	3	Jan–Apr	6
	CENG 465	3	May–Aug	35
	ELEC 514	3	May–Aug	5
2004	CENG 461	3	Jan–Apr	20
	ELEC 514	3	Jan–Apr	6
	CENG 465	3	Jan–Apr	55
	ELEC 543	3	Jan–Apr	5

11.1 Courses Taught (Continued)

Year	Course	Hours/Week	Term	Students
2002	CENG 461	3	Jan–Apr	22
2003	CENG 461	3	Jan–Apr	22
	CENG 465	3	Jan–Apr	46
	ELEC 514	3	Jan–Apr	14
	ELEC 543	3	Jan–Apr	6
	CENG 465	3	Jan–Apr	46
	ELEC 514	3	Jan–Apr	5
	ELEC 543	3	Jan–Apr	8
	ELEC 250	3	May–Aug	142
2001	CENG 461	3	Jan–Apr	21
	CENG 465	3	Jan–Apr	39
	ELEC 514	3	Jan–Apr	5
	ELEC 543	3	Jan–Apr	4
	ELEC 250	3	May–Aug	145
2000	CENG 461	3	Jan–Apr	43
	CENG 465	3	Jan–Apr	51
	ELEC 543	3	Jan–Apr	9
	ELEC 250	3	May–Apr	120
1999	CENG 465	3	Jan–Apr	30
	ELEC 543	3	Jan–Apr	6
	ELEC 250	3	May–Aug	140
	ELEC 642	3	May–Aug	5
1998	CENG 465	3	Jan–Apr	15
	ELEC 543	3	Jan–Apr	5
	ELEC 642	3	Jan–Apr	3
	ELEC 250	3	May–Aug	100
1997	CENG 465	3	Jan–Apr	13
	ELEC 543	3	Jan–Apr	6
	ELEC 250 (Section K01)	3	May–Aug	60
	ELEC 250 (Section K02)	3	May–Aug	100

Courses Taught at King Fahd University of Petroleum & Minerals, & Comp. Eng. Department - Saudi Arabia during Sabbatical Leave.

Year	Course	Hours/Week	Term	Students
1996	COE 201	3	Feb–June	20
	COE 303	3	Feb–June	19
	COE 303	3	Sep–Dec	20
	COE 590	3	Sep–Dec	6

Courses Taught at University of Victoria, Elec. & Comp. Eng. Department.

Year	Course	Hours/Week	Term	Students
1995	CENG 465	3	Jan–Apr	9
	ELEC 543	3	Jan–Apr	4
	CENG 440	3	May–Aug	58
1994	CENG 465	3	Jan–Apr	10
	ELEC 543	3	Jan–Apr	2
	ELEC 415	3	May–Aug	9
1993	ELEC 465	3	Jan–Apr	13
	ELEC 543	3	Jan–Apr	7
	ELEC 415	3	May–Aug	3
	ELEC 541	3	May–Aug	3
1992	ELEC 465	3	Jan–Apr	6
	ELEC 543	3	Jan–Apr	1
	ELEC 649B	3	Jan–Apr	1
	ELEC 415	3	May–Aug	6
	ELEC 541	3	May–Aug	3
1991	ELEC 465	3	Jan–Apr	9
	ELEC 543	3	Jan–Apr	4
	ELEC 649B	3	Jan–Apr	4
	ELEC 250	3	May–Aug	41
	ELEC 415	3	May–Aug	2
	ELEC 541	3	May–Aug	1
1990	ELEC 465	3	Jan–Apr	11
	ELEC 543	3	Jan–Apr	4
	ELEC 649B	3	Jan–Apr	4
	ELEC 250	3	May–Aug	27
	ELEC 415	3	May–Aug	7
	ELEC 541	3	May–Aug	4
1989	ELEC 465	3	Jan–Apr	13
	ELEC 543	3	Jan–Apr	4
	ELEC 649B	3	Jan–Apr	6
	ELEC 415	3	May–Aug	3
	ELEC 541	3	May–Aug	1
	ELEC 564	3	Sep–Dec	11
1988	ELEC 320	3	Jan–Apr	61
	ELEC 465	3	Jan–Apr	7
	ELEC 415	3	May–Aug	10
	ELEC 541	3	May–Aug	2
	ELEC 649B	3	May–Aug	4

11.1 Courses Taught (Continued)

Year	Course	Hours/Week	Term	Students
1987	ELEC 320	3	Jan–Apr	36
	ELEC 649	3	Jan–Apr	1
	ELEC 415	3	May–Aug	6
	ELEC 541	3	May–Aug	2
	ELEC 641	3	May–Aug	1
	ELEC 590	3	May–Aug	1
1986	ELEC 320	3	Jan–Apr	27
	ELEC 641	3	Jan–Apr	7
	ELEC 220	3	Sep–Dec	74
1985	ELEC 250	3	May–Aug	30
	ELEC 590	3	May–Aug	1
	ELEC 590	3	May–Aug	1
	ELEC 220	3	Sep–Dec	50
	ELEC 590	3	Sep–Dec	2
1984	ELEC 220	3	Sep–Dec	40
	PHYS 580	3	Sep–Dec	1
	ELEC 590	3	Sep–Dec	1

11.2 Short Courses Taught

Date	Course	Hours	Attendees	Location
May 1984	VLSI Design	6	11	University of Waterloo
August 1984	MOS VLSI	6	32	University of Victoria

12 ADMINISTRATIVE ACTIVITIES (Committees and Service Activities)

12.1 University and Faculty Committees (includes dates of offices held)

Year(s)	Committee
2011	Acting Dean: 22–23 Feb, 3–18 May, 9–12 August .
2011	Search Committee for the director of the Intra-Faculty Research Centre in Advanced Security, Privacy and Information Systems (2011)
2011	Faculty of Engineering Strategic Planning Committee (Jan 2011–)
2011	Faculty of Engineering Executive Committee (Jan 2011–)
2011	Steering Committee for Faculty of Engineering Security Centre (Jan 2011–)
2009	Acting Comp. Program Director (May-Sep)
2009	Acting Elec. Program Director (May-Sep)
2008	Chair of Department of Information Technology Curriculum Committee (Kuwait University)
2008	Chair of Department of Information Technology Research Committee (Kuwait University)
2008	Member of College for Women Research Committee (Kuwait University)
2007	First Year Orientation Committee (Chair)
2007	Acting Dean: Feb 22–23, May 3-18.
2006	Acting Dean: May 15–22, May 30–June 2, July 17–30, Sep 19–24.
2006	Chair, BEng/BSENG Common Core Review Committee
2005	Acting Dean: January 15–18, May 18–25, 25 July–14 August, 21–27 Sep., 5, 6 October, 13 and 14 October, Nov. 8, 9.
2004	Member of Associate Dean (Research) of Eng. Search Committee
2004–2007	Member of Senate Committee on Agenda and Procedure
2004–2007	Member of Senate Committee on Committees
2004–2007	Member of University Senate
2004	Acting Dean: May 18–25, July 4–11, July 28–August 8, Nov. 1–11.
2002–2005	Member of Senate Committee on Curriculum
2004	Committee to hire Development Assistant for the Faculty of Eng.
2003	Chair, Faculty of Eng. Admissions/Advising Officer search Committee
2003	Chair, Faculty of Eng. Administrative Officer search Committee
2003	Chair, Associate Dean Part-Time Secretary search Committee
2003	Acting Dean: Apr. 2–May 4, May 14–21, Oct. 22–24, Nov. 1–11.
2002–2005	Chair, Faculty Curriculum Committee
2002–2005	Chair, B.Eng. Program Committee
2002–2005	Chair, Undergraduate Programs Committee
2002–2005	Chair, Software Eng. Program Board
2002–2003	Admissions and Awards Committee
2002	Eng. Co-op Coordinator search Committee
2002	Chair, Senior Instructor Search Committee
1999–2002	B.Eng. Program Committee

12.2 University and Faculty Committees (includes dates of offices held) (Continued)

Year(s)	Committee
1998–2001	Chair of Sciences and Eng. Research and Travel Committee
1998–2000	Faculty Curriculum Committee
1998–2000	Research and Travel Committee
1996–1998	Research and Travel Committee
1996–1998	Sciences and Eng. Research and Travel Committee
1994–1995	Senate Appeals Committee
1994–1995	B.Eng. Program Committee
1994–1995	University Senate
1993–1995	Faculty Awards Committee
1992–1993	Library Services Committee
1985–1988	Faculty Computing Services Committee
1985–1986	Search Committee for Dean of Eng.
1984–1987	Research Comp. Users' Committee

12.3 Department Committees and Responsibilities (includes dates of offices held)

Year(s)	Committee
2011	Acting Chair of Department of Elec. & Comp. Eng. (Jan-June)
2011	ECE Strategic Planning Committee (member)
2011	ECE Curriculum Committee (member)
2011	ECE Graduate Studies Committee (member)
2009	Elec. Eng. Program Coordinator (January–June)
2002–2005	Reappointments, Tenure and Promotions Committee
2002	Undergraduate Advisor
2001–2003	Advisory Committee on Planning
2001–2002	Standing Committee on Equipment
2000–2002	Chair, Curriculum Committee
1992–2002	Reappointments, Tenure and Promotions Committee
1999–2001	Graduate Advisor
1999	Chair, Graduate Secretary Search Committee
1999	ELEC 499/CENG 499 Project Coordinator
1999	Undergraduate Advisor
1998–2001	Coordinator, Comp. Eng. Program
1998–2000	Graduate Studies Committee
1997–2000	Curriculum Committee
1992–1994	Chair, Graduate Studies Committee
1992–1994	Graduate Advisor
1991–1992	Committee for Promotion to the Rank of Professor
1989–1990	Reappointments, Tenure and Promotions Committee
1987–1989	Curriculum Committee
1984–1988	Secretary, Department council

12.4 Professional Committees and Assignments External to the University of Victoria (District, Provincial, National and Int.) (Include dates of offices held)

Year(s)	Committee/Organization
2011	Program Co-Chair, IEEE Pacific Rim Conference on Communications, Computers and Signal Processing
2011	Program Co-Chair, Data Intensive Computing and Data Mining
2011	Symposium Chair, International Conference on Computing, Networking and Communications
2008-2011	NSERC Scholarships and Fellowships Selection Committee for Elec. Eng. and Computing Sciences
2007–2008	Research, Graduate & Awards Committee, College for Women, Kuwait University (Member)
2007–2008	Scientific Affairs Committee, Information Sys. Dept. College for Women, Kuwait University (Chair)
2007–2008	ISC Research Committee, Information Sys. Dept. College for Women, Kuwait University (Member)
2007–2008	Course Scheduling Committee, Information Sys. Dept. College for Women, Kuwait University (Member)
2007–2008	Undergraduate Affairs Committee, Information Sys. Dept. College for Women, Kuwait University (Member)
1987–2007	Advanced Sys. Institute, BC, Canada (Associate Member)

13 PROFESSIONAL CONTRIBUTIONS AND ACTIVITIES

13.1 Professional Activities

1. **Series Editor** for CRC Press: Embedded Multi-Core Sys., 2008–
2. Reviewer for PhD program of the Computer Engineering Department at King Fahd University of Petroleum and Minerals (KFUPM), 2010

13.2 Guest Lectures, Invited Talks and Other Presentations

Date	Title	Location
May 17, 2008	Designing an Environmental Elective Course for Information Science Department	College for Women, Kuwait University, Kuwait
July 2, 2007	Performance of the IEEE 802.16 WiMax Protocol	IEEE Dayton Section Speaker Wright State University
Dec. 23, 2006	Distributed e-Mail Packet Classification	German University in Cairo, Cairo
Dec. 23, 2006	Network-on-Chip Design Issues	German University in Cairo, Cairo
Dec. 21, 2006	Distributed e-Mail Packet Classification	Faculty of Eng., Menoufiya University, Menoufiya, Egypt
Dec. 21, 2006	Network-on-Chip Design Issues faculty of Eng., Menoufiya University, Menoufiya, Egypt	
Nov. 2, 2006	Distributed e-Mail Packet Classification	IEEE Southeast Section Michigan Conf., Michigan University, Fairlane Campus, MI
Nov. 1, 2006	Network-on-Chip Design Issues	ECE Dept., Oakland University, Rochester, MI
Dec. 27, 2005	IEEE 802.11 Protocol Modeling	National TeleComm. Institute Cairo, Egypt.
Dec. 27, 2005	Mapping Parallel Algorithms onto Processor Arrays	National TeleComm. Institute Cairo, Egypt.
Dec. 20, 2005	IEEE 802.11 Protocol Modeling	Electronic Research Institute Cairo, Egypt.
Dec. 20, 2005	Mapping Parallel Algorithms onto Processor Arrays	Electronic Research Institute Cairo, Egypt.
Dec. 19, 2005	IEEE 802.11 Protocol Modeling	Egyptian Telephone Company, Helwan, Egypt.

Date	Title	Location
Dec. 18, 2005	IEEE 802.11 Protocol Modeling	Elec. Eng. Dept., Al-Azhar University, Cairo, Egypt.
Oct. 10, 2000	Periodic Markov Chains	Elec. & Comp. Eng. Dept., University of Victoria
Nov. 7, 2000	Periodic Markov Chains	Math Dept., University of Victoria
Mar. 1, 1997	Wireless ATM for Mobile Comm.	Micronet Annual General Meeting, Ottawa
Nov. 15, 1996	Time and Career Management for Professors	Comp. Eng. Dept., King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia
Oct. 1, 1996	Fast Adaptive CORDIC Algorithm	Comp. Eng. Dept., King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia
Mar. 15, 1996	VLSI Design for DSP & Telecommunications	Comp. Eng. Dept., King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia
Oct. 10, 2000	Periodic Markov Chains	Elec. & Comp. Eng. Dept., University of Victoria
Nov. 7, 2000	Periodic Markov Chains	Math Dept., University of Victoria
Mar. 1, 1997	Wireless ATM for Mobile Comm.	Micronet Annual General Meeting, Ottawa
Nov. 15, 1996	Time and Career Management for Professors	Comp. Eng. Dept., King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia
Oct. 1, 1996	Fast Adaptive CORDIC Algorithm	Comp. Eng. Dept., King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia
Mar. 15, 1996	VLSI Design for DSP & Telecommunications	Comp. Eng. Dept., King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia

13.2 Guest Lectures, Invited Talks and Other Presentations (continued)

Date	Title	Occasion
May 1, 1995	ATM Switch Design Issues	Micronet Workshop on ATM ASICs, Vancouver
Mar. 1, 1995	ATM Switch Design	Micronet Annual General Meeting, Ottawa
May 1, 1993	Multirate Sys.	Micronet Annual General Meeting, Ottawa
Jan. 19, 1993	Synthesizing Systolic Arrays: An Overview	Graduate Seminar, University of Victoria
May 20, 1992	Multirate Sys.	Micronet Annual General Meeting, Ottawa
April 27, 1992	Synthesizing Systolic Arrays	Elec. Eng. Dept., Univ. of Waterloo, Waterloo, Ontario
Nov. 20, 1991	Image Compression Using One-Dimensional Vector Quantization	Elec. Eng. Dept. U.B.C., Vancouver, B.C.
May 15, 1991	VLSI Teaching in ECE Department at UVic	Workshop on VLSI Education, U.B.C., Vancouver, B.C.
July 6, 1990	VLSI Research Activities	Dominion Radio Astronomy Observatory, Penticton, B.C.
Sept. 20, 1990	Eng. & Innovation	North Saanich Jr. High School at the University of Victoria
Nov. 30, 1988	VLSI Design Software	University of Victoria
May 19, 1988	Eng. at the University of Victoria	Canadian Institute of Marine Eng.
Nov. 19, 1987	Electronics and Microchip	Greater Victoria Kiwanis Seniors, Victoria
Nov. 18, 1987	Electronics and Microchips	Cordova Bay Kiwanis, Victoria

13.2 Guest Lectures, Invited Talks and Other Presentations (continued)

Date	Title	Occasion
Jun. 18, 1987	A High-Speed Area-Efficient Parallel Multiplier	CMC VLSI Workshop, Queen's University, Kingston, Ontario
Jan. 14, 1986	VLSI Overview	IEEE Victoria Section Meeting
Nov. 19, 1985	A Fourier Transform Algorithm and VLSI Implementation	Elec. Eng. Department, University of British Columbia
Dec. 9, 1984	VLSI Comm. Network Design	Sys. on Silicon (SOS) group meeting, University of Waterloo
July 3, 1984	MOS VLSI Technology	VLSI short course, University of Waterloo
Mar. 1983	Microprocessor Interfacing	Visit to New Jersey Institute of Technology
1981	Electrochemical Solar Cells	Physical Dept. Seminar, Simon Fraser University
1980	Hologram Storage in Photo-refractive Crystals	Physical Dept. Seminar, Simon Fraser University

13.3 Course and Laboratory Manuals, Lecture Notes, and Other Instructional Materials

Year	Course	Title
2008	ELEC 460	Lecture Notes and Web site
Kuwait University		
2008	ETM 450	Lecture Notes and web site
	ISC 100	Lecture Notes and web site
	ISC 101	
	ISC 340	Lecture Notes and web site
	ISC 340	Laboratory and web site
2007	ISC 101	Lecture Notes and web site
	ISC 357	Lecture Notes and web site
	ISC 357	Laboratory and web site
University of Victoria		
2007	ELEC 360	Lecture notes and web site
2006	CENG 441	Lecture notes, web update, lab projects and manual
2005	CENG 465	Lecture notes, web update, lab projects and manual
	ELEC 250	Lab manual
2004	CENG 465	Lab experiments, CAD tools, and web updates
2003	ELEC 250	Lecture note development for course pack
	CENG 460	Lecture notes and web development
	CENG 460	Experiment design and Lab manual preparation
2002	ELEC 250	Lecture note development for course pack
	CENG 460	Experiment design and Lab manual preparation
2001	ELEC 250	Lecture slides in PDF and publish on web
	CENG 461	Lecture slides in PDF and publish on web
	CENG 465	Lecture slides in PDF and publish on web

13.3 Course and Laboratory Manuals, Lecture Notes, and Other Instructional Materials (Continued)

Year	Course	Title
1999	ELEC 250	Linear Circuits I, Laboratory Manual
	CENG 461	Lecture Notes
	CENG 461	Course website
	CENG 465	Course website
	ELEC 250	Course website
	CENG 465	Laboratory website
	ELEC 250	Laboratory website
2000	ELEC 250	Linear Circuits I, Laboratory Manual
1998	ELEC 642	VLSI Arrays for Iterative Algorithms, Lecture Notes
	ELEC 250	Linear Circuits I, Lecture Notes
	ELEC 250	Linear Circuits I, Laboratory Manual
1997	CENG 465	Digital VLSI Design, Lecture Notes
King Fahd University of Petroleum & Minerals		
1996	COE 201	Digital Logic I, Lecture Notes
	COE 303	Digital Logic II, Lecture Notes
	COE 590	Recent Techniques for Mapping DSP Algorithms on Processor Arrays, Lecture Notes
University of Victoria		
1995	CENG 440	Digital Logic II, Lecture Notes
	CENG 440	Digital Logic II, Laboratory Manual
	CENG 465	Digital VLSI Sys., Lecture Notes
	CENG 465	Digital VLSI Sys. Laboratory Manual
1994	CENG 465	Digital VLSI Sys., Lecture Notes
	CENG 465	Digital VLSI Sys., Laboratory Manual
	ELEC 415	Microelectronics Technology, Lecture Notes
1993	ELEC 415	Microelectronics Technology, Laboratory Manual
1991	ELEC 250	Linear Circuits I, Lecture Notes
	ELEC 415	Microelectronics Technology, Lecture Notes
	ELEC 465	Design of VLSI Sys., Lecture Notes
	ELEC 649B	VLSI Digital Signal Processing, Lecture Notes
	ELEC 590	Wavelet Transforms, Preparation of Reading Materials

13.3 Course and Laboratory Manuals, Lecture Notes, and Other Instructional Materials (Continued)

Year	Course	Title
1992	ELEC 415	Microelectronics Technology, Lecture Notes
	ELEC 465	Design of VLSI Sys., Lecture Notes
	ELEC 649B	VLSI Digital Signal Processing, Lecture Notes
1989	ELEC 564	Neural Networks and their Implementation, Lecture Notes
	ELEC 649B	VLSI Digital Signal Processing, Lecture Notes
1990	ELEC 250	Linear Circuits, I, Lecture Notes
	ELEC 415	Microelectronics Technology, Lecture Notes
	ELEC 465	Design of VLSI Sys., Lecture Notes
	ELEC 465	Design of VLSI Sys., Laboratory Manual
1988	ELEC 220	Elec. Properties of Materials, Lecture Notes
	ELEC 320	Electronic Devices: I, Lecture Notes
	ELEC 415	Microelectronics Technology, Laboratory Manual
	ELEC 465	Design of VLSI Sys., Lecture Notes
	ELEC 465	Design of VLSI Sys., Laboratory Manual
	ELEC 649B	Selected Topics in VLSI, Lecture Notes
1987	ELEC 320	Electronic Devices: I
	ELEC 320	Electronic Devices: I, Laboratory Manual
	ELEC 415	Microelectronics Technology
	ELEC 415	Microelectronics Technology, Laboratory Manual
	ELEC 541	VLSI Technology
	ELEC 590	Silicon Compilation
	ELEC 641	VLSI Sys. Design
	ELEC 649	VLSI Silicon Compiler Development
	ELEC 649	VLSI Silicon Compiler Development, Software Tools
1986	ELEC 220	Elec. Properties of Materials
	ELEC 220	Elec. Properties of Materials, Manual
	ELEC 320	Electronic Devices: I
	ELEC 320	Electronic Devices: I, Laboratory Manual
	ELEC 641	VLSI Sys. Design
1985	ELEC 220	Elec. Properties of Materials
	ELEC 250	Linear Circuits: I
	ELEC 250	Linear Circuits: I, Laboratory Manual
	ELEC 590	VLSI Technology
	ELEC 590	VLSI Sys. Design

13.3 Course and Laboratory Manuals, Lecture Notes, and Other Instructional Materials (Continued)

Year	Course	Title
1984	ELEC 220	Elec. Properties of Materials
	PHYS 580	Plasma Physics and Measurements
	ELEC 590	Plasma Emission and Mass Spectroscopy

University of Waterloo

1984 ELEC 438 Switching and Digital Circuits

14 OTHER INFORMATION (Contributions not documented in Sections 1-12)

14.1 Reviewer for Journals

Every year I review approximately 50 journal manuscripts. Due to my work in several disparate areas, journals of different foci solicit my reviews. Following is an alphabetical list of the journals:

1. Arabian J. of Science and Eng. (AJSE)
2. Association of Computing Machinery (ACM)
3. Canadian J. of Elec. and Comp. Eng.
4. Canadian J. of Physics
5. Comp. and Elec. Eng.
6. The Computer Journal,
7. Digital Signal Processing
8. Electronics Letters
9. Elsevier's Applied Mathematics and Computation
10. Elsevier's Comp.s & Elec. Eng.
11. IEE Electronics Letters
12. IEE Proc. Circuits, Devices and Sys.
13. IEE Proc. Comm.
14. IEE Proc. Part E
15. IEEE Sensors Journal
16. IEEE Trans. on Circuits and Sys.
17. IEEE Trans. on Circuits and Sys. II
18. IEEE Trans. on Computers
19. IEEE Trans. on Consumer Electronics
20. IEEE Trans. on Networks, 2006
21. IEEE Trans. on Sys., Man, and Cybernetics

22. IEEE Trans. on Very Large Scale Integration
23. IET Circuits, Devices and Sys. IET
24. IETE Technical Review
25. ETRI Journal
26. Information Security J.: A Global Perspective
27. Integration: The VLSI J.
28. Int. J. of Comp. Aided VLSI Design
29. J. of Circuits, Sys. and Computers.
30. J. of Comm., Academy Publishers
31. J. of Computers
32. J. of Computers and Elec. Eng.
33. J. of the Franklin Institute
34. J. of Microelectronics Circuits
35. J. of Sys. and Software (Security Technology)
36. The Open Elec. and Electronic Eng. J. (TOEEJ)
37. Performance Evaluation

14.2 Reviewer for Conferences:

1. Canadian Conf. on VLSI (CCVLSI)
2. IEEE Globecom
3. IEEE Pacific Rim Conf. on Comm., Comp. and Signal Processing (PACRIM)
4. Int. Conf. on Information Science, Technology and Applications (ISTA)
5. Int. Conf. on Comm., Circuits and Sys. (ICCCAS)
6. Int. Conf. on Microelectronics (ICM)
7. Int. Sym. on Circuits and Sys. (ISCAS)
8. Int. Sym. on Multiple-valued Logic (ISMVL)
9. Int. Sym. on Wireless Sys. and Networks (ISWSN)
10. Midwest Sym. on Circuits and Sys. (MWSCS)
11. IEEE Int. Sym. on Signal Processing and Information Technology (ISSPIT)

14.3 Contributions to Conferences

1. Technical Program Committee Chair of the Data Intensive Computing, Data Mining track of Int. Conf. on P2P, Parallel, Grid, Cloud and Internet Computing (3PGCIC 2011), 2011.
2. Committee member of the Sensor Networks: Technology, Applications, and Security track of the ITNG 2011 Conf., 2011.
3. Int. Conf. on Comm. (ICT) 2009, Technical Program Committee.
4. Int. Conf. on Microelectronics (ICM) 2009, Technical Program Committee.
5. IEEE Pacific Rim Conf. on Comm., Comp.s, and Signal Processing (PACRIM'09), Aug. 22–24, 2009, Victoria, B.C., Canada, Publication Chair.
6. IEEE Int. Sym. on Signal Processing and Information Technology (ISSPIT 2009), Dec. 18-21, Ajman, United Arab Emirates Member of technical program committee
7. Int. Conf. on Information Science, Technology and Applications (ISTA) 2009, Technical Program Committee Chair. All Tracks Chair.
8. IEEE Int. Conf. on Comp. Sys. and Applications (AICCSA-08), Technical Program Committee Chair
9. IEEE Int. Conf. on Microelectronics (ICM'07), Dec. 29-31, 2007, Technical Program Committee
10. Methodes et Outil d'Aide a la Decision (MOAD'07), 18–20 November, 2007, Member of program committee
11. IEEE Midwest Sym. on Circuits and Sys. (MWSCAS'07), Aug. 5–8, 2007, Special Session co-chair.
12. IEEE Pacific Rim Conf. on Comm., Comp.s, and Signal Processing (PACRIM'07), Aug. 22–24, 2007, Victoria, B.C., Canada, Conf. chair.
13. IEEE Int. Sym. on Signal Processing and Information Technology (ISSPIT 2002), August 18-21, 2006, Conf. Co-Chair
14. IEEE Pacific Rim Conf. on Comm., Comp.s, and Signal Processing (PACRIM'05), Aug. 24–26, 2005, Victoria, B.C., Canada, Conf. chair.
15. IEEE Pacific Rim Conf. on Comm., Comp.s, and Signal Processing (PACRIM'03), Aug. 28–30, 2003, Victoria, B.C., Canada, Conf. chair.
16. IEEE 15th Int. Conf. on Microelectronics (ICM 03), Dec. 9–11, 2003, Cairo, Egypt. Member of Technical Program Committee.
17. IEEE Int. Sym. on Signal Processing and Information Technology (ISSPIT 2002), Dec. 18-21, Marrakech, Morocco. Member of steering committee

18. Int. Sym. on Wireless Sys. and Networks 2002, Member of Technical Committee.
19. IEEE Int. Sym. on Signal Processing and Information Technology (ISSPIT 2001), Dec. 29-31, Cairo, Egypt. Publication chair and member of steering committee
20. 1989 IEEE Pacific Rim Conf. on Comm., Comp.s and Signal Processing, member of program committee (Registration)
21. Pacific Rim Conf. on Comm., Comp.s and Signal Processing, May 1993, session chair
22. Canadian Conf. on Elec. and Comp. Eng., August 1993, session chair
23. IEEE Pacific Rim Conf. on Comm., Comp.s and Signal Processing, 1997, session chair
24. 1989 IEEE Int. Sym. on Circuits and Sys., member of technical program committee
25. IEEE Electronicom, Toronto, October 1984, session chair
26. Canadian Conf. on Elec. and Comp. Eng., Vancouver, 1988, session chair

14.4 Reviewer for research grant applications

1. NSERC Discovery Grants (three applications), 2009
2. NSERC Discovery Grant, 2002
3. NSERC Strategic Research, 2002
4. Natural Sciences and Eng. Research Council operating grants, 1986, 1989, 1993, 1998, 2000
5. NSERC Research Partnership program, 1994
6. Microelectronics Development Fund, 1989

14.5 External Examiner for a PhD Degrees

1. University of Malaya, December 2009
2. University of British Columbia, December 2009
3. University of British Columbia, July 2002
4. University of British Columbia, January 2000
5. University of British Columbia, March 1998
6. University of Windsor, January, 1994
7. Concordia University, September, 1991

14.6 Peer Reviewer for Promotion and Tenure Applications

1. Al Hosn University (Abu Dhabi), two cases, 2009
2. University of Windsor, 2006
3. King Saud University, 2004
4. University of British Columbia, Canada, 2003
5. University of British Columbia, Canada, 2002
6. King Saud University, Riyadh, Saudi Arabia, 2002
7. Sultan Qaboos University, Sultanate of Oman, 2000
8. King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia, 1998
9. King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia, 1997
10. School of Eng. and Comp. Science, Oakland University, 1987

15 Professional Development Workshops and Courses

Planning Effective Meetings, Teaching and Learning Centre, University of Victoria, 1985, 1986

Teaching Workshop, University of Victoria, 1986, 1987, 1988

One-to-one consultation on effective teaching with Director of the Learning and Teaching Centre, 2000

Retreat on Int. Development, Dunsmuir Lodge, University of Victoria, April 2003

Management Training Course, CHERD, Dunsmuir Lodge, University of Victoria, May 2003