

UNIVERSITY OF VICTORIA

Appointment Date: July 1999

FACULTY CURRICULUM VITAE

Name GULLIVER, Thomas Aaron

Faculty or School Engineering Department Electrical & Computer Engineering

Citizenship Canadian

1. DEGREES AND DIPLOMAS

Degree or Diploma	Field	Institution	Year Granted
B.Sc.	Electrical Engineering	University of New Brunswick	1982
M.Sc.	Electrical Engineering	University of New Brunswick	1984
Ph.D.	Electrical & Computer Eng.	University of Victoria	1989

Title of Thesis or Dissertation

Construction of Quasi-Cyclic Codes

**2. MAJOR FIELD(S) OF SCHOLARLY, PROFESSIONAL AND RESEARCH INTERESTS**

- Algebraic coding theory
- Information theory and source coding
- Cryptography
- Software radio
- Space-time codes and MIMO systems
- Ultra wideband communications
- DSP applications in mobile, wireless and optical communications
- Turbo codes and iterative decoding algorithms
- Spread spectrum and multiple access communications
- Efficient algorithms and iterative processing
- Design and implementation of error correcting codes
- Efficient computation in Galois fields
- Free space optical communications

**3. MEMBERSHIPS AND OFFICES HELD IN LEARNED AND PROFESSIONAL SOCIETIES (Include dates of offices held)**

Institute of Electrical and Electronics Engineers	Member	1982-1995
Institute of Electrical and Electronics Engineers	Senior Member	1996-
Australasian Association for Engineering Education	Member	1998-
Association of Professional Engineers of Ontario	P. Eng.	1994-2005
Canadian Society of Information Theory	President	1993-1995
Canadian Society of Information Theory	Board Member	1992-
IEEE New Zealand South Section	Executive Committee	1996-1999
IEEE Communications Society NZ Chapter	Founding Chairman	1999
IEEE Information Theory Society	Distinguished Lecturer	2000-
IEEE Information Theory Society	Secretary	2000-2002
IEEE Information Theory Society	Board of Governors	2000-2002
IEEE Information Theory Society	Webmaster	2000-2005
Association of Professional Engineers and Geoscientists of British Columbia	P. Eng.	2005-
Institute of Electronics, Information and Communication Engineers	Member	2005-

**4. SCHOLARSHIPS, FELLOWSHIPS, HONOURS AND AWARDS**

<b>Year(s)</b>	<b>Amount</b>	<b>Source</b>	<b>Title</b>
1982-85	\$7,400	NSERC	Postgraduate Scholarship
1998		University of Canterbury Students Association	Best Lecturer in Faculty of Engineering
2000-04	\$40,000	British Columbia Advanced Systems Institute	Fellowship
2002	\$500	University of Victoria Faculty of Engineering	Excellence in Teaching Award
2002-03	\$95,000	New Media Innovation Centre	Affiliate Scientist
2002		Engineering Institute of Canada	Fellowship
2003		University of Canterbury	Visiting Erskine Fellowship

#### 4. SCHOLARSHIPS, FELLOWSHIPS, HONOURS AND AWARDS (cont'd)

<b>Year(s)</b>	<b>Amount</b>	<b>Source</b>	<b>Title</b>
2003		University of Bergen	Visiting Professor
2007-2014	\$200,000	Government of Canada	Tier I Canada Research Chair

#### 5. POSITIONS HELD PRIOR TO APPOINTMENT AT UNIVERSITY OF VICTORIA (Include academic and other)

<b>Inclusive Years</b>	<b>Title/Position</b>	<b>Institution/Organization</b>
1984	Research Engineer	Electrical Engineering University of New Brunswick, Fredericton, NB
1985-87	Research Engineer	Electrical and Computer Engineering University of Victoria, Victoria, BC
1989	Sessional Lecturer	Computer Science University of Victoria, Victoria, BC
1989	Research Engineer	Electrical and Computer Engineering University of Victoria, Victoria, BC
1989-91	Defence Scientist	Defence Research Establishment Ottawa Ottawa, ON
1990-91	Adjunct Research Professor	Systems and Computer Engineering Carleton University, Ottawa, ON
1991	Sessional Lecturer	Systems and Computer Engineering Carleton University, Ottawa, ON
1991-95	Assistant Professor	Systems and Computer Engineering Carleton University, Ottawa, ON
1995-96	Associate Professor	Systems and Computer Engineering Carleton University, Ottawa, ON
1997-99	Adjunct Associate Professor	Electrical and Computer Engineering University of Victoria, Victoria, BC
1996-99	Senior Lecturer	Electrical and Electronic Engineering University of Canterbury, Christchurch, New Zealand

## 6. APPOINTMENTS AT UNIVERSITY OF VICTORIA

### a. Academic

<b>Inclusive Years</b>	<b>Rank</b>	<b>Department</b>
1999 - 2001	Associate Professor	Electrical and Computer Engineering
2001 -	Professor	Electrical and Computer Engineering

### b. Administrative-Formally Designated (Board of Governors) positions carrying stipend and/or release time

<b>Inclusive Years</b>	<b>Title</b>	<b>Department</b>
2003-2004	Acting Chair	Electrical and Computer Engineering

## 7. PUBLICATIONS

### a. Books, Contributions to Books

1. Gulliver, T.A., Proceedings, Canadian Conference on Electrical and Computer Engineering, Vols. 1 & 2, 1533 pages, Sept. 1990.
2. Gulliver, T.A. and N.P. Secord, Book of Abstracts, *Canadian Workshop on Information Theory*, 39 pages, May 1993.
3. Gulliver, T.A. and N.P. Secord, Information Theory and Applications, *Springer-Verlag Lecture Notes in Computer Science*, Vol. 793, 394 pages, Apr. 1994.
4. Fortier, P., J.-Y. Chouinard and T.A. Gulliver, Information Theory and Applications 2, *Springer-Verlag Lecture Notes in Computer Science*, Vol. 1133, 308 pages, Sept. 1996.
5. Alouini, M.-S. and T.A. Gulliver, Book of Extended Abstracts, *IEEE International Symposium on Advances in Wireless Communications*, 216 pages, Sept. 2002.
6. Gulliver, T.A., *Proceedings International Workshop on Advances in Communications (VijayFest)*, 24 pages, Sept. 2008.
7. Abdel-Hamid, Y., F. Gebali and T.A. Gulliver, *WiMAX Random Access and Contention Strategies*, to appear in *WiMAX Networks Planning and Optimization*, Y. Zhang Ed., 2009.

### b. Refereed Journal Publications

1. Doraiswami, R. and A. Gulliver, "A control strategy for computer numerical control exhibiting precision and robustness", *ASME J. Dynamic Systems, Measurement and Control*, pp. 56-62, Mar. 1984.
2. Wang, Q., V.K. Bhargava and T.A. Gulliver, "Construction of optimal quasi-cyclic codes based on optimum distance profile convolutional codes", *Archiv fur Elektronik und Ubertragungstechnik*, Vol. 43, No. 1, pp. 62-64, Jan. 1989.
3. Wang, Q., T.A. Gulliver, V.K. Bhargava and E.B. Felstead, "Error correcting codes for fast frequency hopped MFSK spread spectrum satellite communications under worst case jamming", *Int. J. Satell. Commun.*, Vol. 7, No. 3, pp. 115-128, July-Sept. 1989.
4. Wang, Q., T.A. Gulliver, V.K. Bhargava and E.B. Felstead, "Performance of error-eraser-correction decoding of Reed-Solomon codes for frequency hop communications in multitone interference", *IEE Proc. Pt. I*, Vol. 136, No. 4, pp. 298-304, Aug. 1989.
5. Gulliver, T.A. and V.K. Bhargava, "Some properties of self-reciprocal polynomials", *Appl. Math. Lett.*, Vol. 3, No. 3, pp. 47-51, 1990.
6. Wang, Q., T.A. Gulliver and V.K. Bhargava, "Probability distribution of DPSK in tone interference and applications to SFH/DPSK", *IEEE J. Select. Areas Commun.*, Vol. 8, No. 5, pp. 895-906, June 1990.

## 7. PUBLICATIONS

### b. Refereed Journal Publications (cont'd)

7. Gulliver, T.A. "Comment on New class of codes suitable for computer error control", *Elect. Lett.*, Vol. 26, No. 15, pp. 1215-1216, July 1990.
8. Wang, Q., T.A. Gulliver, V.K. Bhargava and E.B. Felstead, "Performance of fast frequency-hopped noncoherent MFSK with a fixed hop rate under worst case jamming", *IEEE Trans. Commun.*, Vol. 38, No. 10, pp. 1786-1798, Oct. 1990.
9. Gulliver, T.A. and V.K. Bhargava, "Some best rate  $1/p$  and  $(p-1)/p$  systematic quasi-cyclic codes", *IEEE Trans. Inform. Theory*, Vol. 37, No. 3, pp. 552-555, May 1991.
10. Gulliver, T.A., M. Serra and V.K. Bhargava, "The generation of primitive polynomials in  $GF(q)$  with independent roots and their applications for power residue codes, VLSI testing and finite field multipliers using normal basis", *Int. J. Electronics*, Vol. 71, No. 4, pp. 559-576, Oct. 1991.
11. Gulliver, T.A., "Self-reciprocal polynomials and generalized Fermat numbers", *IEEE Trans. Inform. Theory*, Vol. 38, No. 3, pp. 1149-1154, May 1992.
12. Gulliver, T.A. and V.K. Bhargava, "Self-dual codes based on the twin prime product 35", *Appl. Math. Lett.*, Vol. 5, No. 3, pp. 95-98, May 1992.
13. Gulliver, T.A. and V.K. Bhargava, "Nine good rate  $(m-1)/pm$  quasi-cyclic codes", *IEEE Trans. Inform. Theory*, Vol. 38, No. 4, pp. 1366-1369, July 1992.
14. Gulliver, T.A. and V.K. Bhargava, "Some best rate  $1/p$  and  $(p-1)/p$  quasi-cyclic codes over  $GF(3)$  and  $GF(4)$ ", *IEEE Trans. Inform. Theory*, Vol. 38, No. 4, pp. 1369-1374, July 1992.
15. Gulliver, T.A. and V.K. Bhargava, "A systematic (16,8) code for correcting double errors and detecting triple-adjacent errors", *IEEE Trans. Computers*, Vol. 42, No. 1, pp. 109-112, Jan. 1993.
16. Ezers, R.E., E.B. Felstead, T.A. Gulliver and J.S. Wight, "An analytical method for linear combining with application to FFH/NCFSK receivers", *IEEE J. Select. Areas Commun.*, Vol. 11, No. 3, pp. 454-464, Apr. 1993.
17. Gulliver, T.A. and V.K. Bhargava, "Twelve good rate  $(m-r)/pm$  binary quasi-cyclic codes", *IEEE Trans. Inform. Theory*, Vol. 39, No. 5, pp. 1750-1751, Sept. 1993.
18. Wang, Q., T.A. Gulliver, L.J. Mason and V.K. Bhargava, "Performance of SFH/MDPSK in tone interference and Gaussian noise", *IEEE Trans. Commun.*, Vol. 42, No. 2/3/4, pp. 1450-1454, Feb/Mar/Apr. 1994.
19. Bigloo, A.M.Y., T.A. Gulliver, Q. Wang and V.K. Bhargava, "A robust rate-adaptive hybrid ARQ scheme for frequency-hopped spread-spectrum multiple-access communication systems", *IEEE J. Select. Areas Commun.*, Vol. 12, No. 5, pp. 917-924, June 1994.

## 7. PUBLICATIONS

### b. Refereed Journal Publications (cont'd)

20. Kaye, A.R., K. Anand, T.A. Gulliver and S.A. Mahmoud, "FEC and priority for VBR video distribution over ATM", *Canadian J. Elec. & Computer Eng.*, Vol. 19, No. 3, pp. 123-130, July 1994.
21. Gulliver, T.A. and V.K. Bhargava, "Two new rate  $2/p$  binary quasi-cyclic codes", *IEEE Trans. Inform. Theory*, Vol. 40, No. 5, pp. 1667-1668, Sept. 1994.
22. Gulliver, T.A., R.E. Ezers, E.B. Felstead and J.S. Wight, "The performance of diversity combining for fast FH NCFSK in Rayleigh fading", *European Trans. on Telecom. & Related Tech.*, Vol. 6, No. 1, pp. 53-62, Jan.-Feb. 1995.
23. Gulliver, T.A. and V.K. Bhargava, "A (105,10,47) quasi-cyclic code", *Appl. Math. Lett.*, Vol. 8, No. 4, pp. 67-70, July 1995.
24. Gulliver, T.A., "New optimal ternary linear codes", *IEEE Trans. Inform. Theory*, Vol. 41, No. 4, pp. 1182-1185, July 1995.
25. Gulliver, T.A., "New optimal ternary linear codes of dimension 6", *Ars Combinatoria*, Vol. 40, pp. 97-108, Aug. 1995.
26. Gulliver, T.A. and V.K. Bhargava, "An updated table of rate  $1/p$  quasi-cyclic codes", *Appl. Math. Lett.*, Vol. 8, No. 5, pp. 81-86, Sept. 1995
27. Gulliver, T.A. and V.K. Bhargava, Reply to comments on "A systematic (16,8) code for correcting double errors and detecting triple-adjacent errors", *IEEE Trans. Computers*, Vol. 44, No. 12, pp. 1473-1474, Dec. 1995.
28. Gulliver, T.A., "Two new optimal ternary two-weight codes and strongly regular graphs", *Discrete Math.*, Vol. 149, pp. 82-92, Feb. 1996.
29. Gulliver, T.A. and M. Harada, "Weight enumerators of extremal singly-even [60,30,12] codes", *IEEE Trans. Inform. Theory*, Vol. 42, No. 2, pp. 658-659, Mar. 1996.
30. Gulliver, T.A., "A new two-weight code and strongly regular graph", *Appl. Math. Lett.*, Vol. 9, No. 2, pp. 17-20, Mar. 1996.
31. Gulliver, T.A. and V.K. Bhargava, "New good rate  $(m-1)/pm$  ternary and quaternary quasi-cyclic codes", *Des., Codes and Crypt.*, Vol. 7, No. 3, pp. 223-233, Mar. 1996.
32. Gulliver, T.A. M. Jorgenson and W.K. Moreland, "Performance of Reed-Solomon codes with dependent symbol errors", *IEE Proc. – Commun.*, Vol. 143, No. 3, pp. 117-121, June 1996.
33. Gulliver, T.A. and V.K. Bhargava, "Some best rate  $1/p$  quasi-cyclic codes over  $GF(5)$ ", *Information Theory and Applications II, Springer-Verlag Lecture Notes in Computer Science*, Vol. 1133, pp. 28-40, Sept. 1996.

## 7. PUBLICATIONS

### b. Refereed Journal Publications (cont'd)

34. Esmaeili, M. T.A. Gulliver and N.P. Secord, "Trellis complexity of linear block codes via atomic code words", *Information Theory and Applications II, Springer-Verlag Lecture Notes in Computer Science*, Vol. 1133, pp. 130-148, Sept. 1996.
35. Gulliver, T.A., "New optimal quaternary linear codes of dimension 5", *IEEE Trans. Inform. Theory*, Vol. 42, No. 6, pp. 2260-2265, Nov. 1996.
36. Bigloo, A.M.Y., T.A. Gulliver and V.K. Bhargava, "A slotted frequency-hopped multiple-access network with packet combining", *IEEE J. Select. Areas Commun.*, Vol. 14, No. 9, pp. 1859-1865, Dec. 1996.
37. Gulliver, T.A. and V.K. Bhargava, "Improvements to the bounds on optimal binary linear codes of dimensions 11 and 12", *Ars Combinatoria*, Vol. 44, pp. 173-182, Dec. 1996.
38. Gulliver, T.A. and V.K. Bhargava, "New optimal binary linear codes of dimensions 9 and 10", *IEEE Trans. Inform. Theory*, Vol. 43, No. 1, pp. 314-316, Jan. 1997.
39. Gulliver, T.A. and M. Harada, "Classification of extremal double circulant formally self-dual even codes", *Des., Codes and Crypt.*, Vol. 11, No. 1, pp. 25-36, Apr. 1997.
40. Esmaeili, M., T.A. Gulliver and N.P. Secord, "Quasi-cyclic structure of Reed-Muller codes and their smallest regular trellis diagram", *IEEE Trans. Inform. Theory*, Vol. 43, No. 3, pp. 1040-1052, May 1997.
41. Gulliver, T.A. and M. Harada, "Weight enumerators of double circulant codes and new extremal self-dual codes", *Des., Codes and Crypt.*, Vol. 11, No. 2, pp. 141-150, May 1997.
42. Gulliver, T.A. and M. Harada, "Certain self-dual codes over  $Z_4$  and the odd Leech lattice", *Applied Algebra, Algebraic Algorithms & Error-Correcting Codes, Springer-Verlag Lecture Notes in Computer Science*, Vol. 1255, pp. 130-137, June 1997.
43. Östergård, P.R.J. and T.A. Gulliver, "Improved bounds for ternary linear codes of dimension 7", *IEEE Trans. Inform. Theory*, Vol. 43, No. 4, pp. 1377-1381, July 1997.
44. Daskalov, R.N. and T.A. Gulliver, "New good quasi-cyclic ternary and quaternary codes", *IEEE Trans. Inform. Theory*, Vol. 43, No. 5, pp. 1647-1650, Sept. 1997.
45. Gulliver, T.A., "Improvements to the bounds on optimal ternary linear codes of dimension 6", *IEEE Trans. Inform. Theory*, Vol. 43, No. 5, pp. 1632-1638, Sept. 1997.
46. Dougherty, S.T., T.A. Gulliver and M. Harada, "Extremal binary self-dual codes", *IEEE Trans. Inform. Theory*, Vol. 43, No. 6, pp. 2036-2047, Nov. 1997.
47. Gulliver, T.A., "Matching Q-ary Reed-Solomon codes with M-ary modulation", *IEEE Trans. Commun.*, Vol. 45, No. 11, pp. 1349-1353, Nov. 1997.

## 7. PUBLICATIONS

### b. Refereed Journal Publications (cont'd)

48. Bigloo, A.M.Y., T.A. Gulliver and V.K. Bhargava, "Maximum likelihood decoding and code combining for DS/SSMA slotted ALOHA", *IEEE Trans. Commun.*, Vol. 45, No. 12, pp. 1602-1612, Dec. 1997.
49. Gulliver, T.A. and M. Harada, "The existence of a formally self-dual even [70,35,14] code", *Appl. Math. Lett.*, Vol. 11, No. 1, pp. 95-98, Jan. 1998.
50. Esmaeili, M., T.A. Gulliver, N.P. Secord and S.A. Mahmoud, "A link between quasi-cyclic codes and convolutional codes", *IEEE Trans. Inform. Theory*, Vol. 44, No. 1, pp. 431-435, Jan. 1998.
51. Gulliver, T.A. and M. Harada, "Classification of extremal double circulant self-dual codes of lengths 64 to 72", *Des., Codes and Crypt.*, Vol. 13, No. 3, pp. 257-269, Mar. 1998.
52. Firmanto, W.T. and T.A. Gulliver, "Code combining of Reed-Muller codes in an indoor wireless environment", *Wireless Personal Commun.*, Vol. 6, No. 3, pp. 359-373, Mar. 1998.
53. Maltais, P. and T.A. Gulliver, "Pascal matrices and Stirling numbers", *Appl. Math. Lett.*, Vol. 11, No. 2, pp. 7-11, Mar. 1998.
54. Gulliver, T.A. and V.K. Bhargava, "Projective spaces and quasi-cyclic codes", *Ars Combinatoria*, Vol. 48, pp. 147-160, Apr. 1998.
55. Harada, M., T.A. Gulliver and H. Kaneta, "Classification of binary double circulant extremal self-dual codes up to length 62", *Discrete Math.*, Vol. 188, pp. 127-136, June 1998.
56. Gulliver, T.A. and P.R.J. Östergård, "Improved bounds on quaternary linear codes of dimension 6", *Appl. Algebra in Eng., Commun. & Comput.*, Vol. 9, No. 2, pp. 153-159, July 1998.
57. Moher, M. and T.A. Gulliver, "Cross-entropy and iterative decoding", *IEEE Trans. Inform. Theory*, Vol. 44, No. 7, pp. 3097-3104, Nov. 1998.
58. Gulliver, T.A. and M. Harada, "Double circulant self-dual codes over  $Z_{2k}$ ", *IEEE Trans. Inform. Theory*, Vol. 44, No. 7, pp. 3105-3123, Nov. 1998.
59. Lin, W., T.A. Gulliver and F. Dehne, "Parallel decoding of double-error-correcting binary BCH codes", *Appl. Math. Lett.*, Vol. 11, No. 6, pp. 11-14, Nov. 1998.
60. Gulliver, T.A. and M. Harada, "Extremal double circulant type II codes over  $Z_4$  and Construction of 5-(24,10,36) designs", *Discrete Math.*, Vol. 194, pp. 129-137, Jan. 1999.
61. Dougherty, S.T., T.A. Gulliver and M. Harada, "Optimal ternary formally self-dual codes", *Discrete Math.*, Vol. 196, pp. 117-135, Feb. 1999.
62. Gulliver, T.A., "A type I self-dual code of length 16 over  $F_2 + uF_2$ ", *Austral. J. Combin.*, Vol. 19, pp. 235-238, Mar. 1999.

## 7. PUBLICATIONS

### b. Refereed Journal Publications (cont'd)

63. Gulliver, T.A. and M. Harada, "Codes of lengths 120 and 136 meeting the Grey-Rankin bound and quasi-symmetric designs", *IEEE Trans. Inform. Theory*, Vol. 45, No. 2, pp. 703-706, Mar. 1999.
64. Gulliver, T.A. and N. Senkevitch, "On a class of self-dual codes derived from quadratic residues", *IEEE Trans. Inform. Theory*, Vol. 45, No. 2, pp. 701-702, Mar. 1999.
65. Dougherty, S.T., T.A. Gulliver and M. Harada, "Type II self-dual codes over finite rings and even unimodular lattices", *J. Alg. Combin.*, Vol. 9, pp. 233-250, May 1999.
66. Gulliver, T.A. V.K. Bhargava and J.S. Stein, "Q-ary Gray codes and weight distributions", *Appl. Math. & Comp.*, Vol. 103, pp. 97-109, May 1999.
67. Gulliver, T.A. and M. Harada, "New optimal self-dual codes over GF(7)", *Graphs & Combin.*, Vol. 15, No. 2, pp. 175-186, June 1999.
68. Daskalov, R.N., T.A. Gulliver and E. Metodieva, "New ternary linear codes", *IEEE Trans. Inform. Theory*, Vol. 45, No. 5, pp. 1687-1688, July 1999.
69. Daskalov, R.N. and T.A. Gulliver, "Bounds on minimum distance for linear codes over GF(5)", *Appl. Algebra in Eng., Commun. & Comput.*, Vol. 9, No. 6, pp. 547-558, July 1999.
70. Esmaeili, M., T.A. Gulliver and N.P. Secord, "The minimal generator matrix of a vector space", *Appl. Algebra in Eng., Commun. & Comput.*, Vol. 10, No. 1, pp. 1-14, Sept. 1999.
71. Betsumiya, K., T.A. Gulliver and M. Harada, "On binary extremal formally self-dual even codes", *Kyushu J. Math.*, Vol. 53, No. 2, pp. 421-430, Sept. 1999.
72. Gulliver, T.A. and M. Harada, "An optimal unimodular lattice in dimension 39", *J. Combin. Theory Ser. A*. Vol. 88, pp. 158-161, Oct. 1999.
73. Gulliver, T.A. and M. Harada, "Construction of optimal type IV self-dual codes over  $F_2 + uF_2$ ", *IEEE Trans. Inform. Theory*, Vol. 45, No. 7, pp. 2520-2521, Nov. 1999.
74. Betsumiya, K. T.A. Gulliver and M. Harada, "Binary optimal linear rate 1/2 codes", *Applied Algebra, Algebraic Algorithms & Error-Correcting Codes, Springer-Verlag Lecture Notes in Computer Science*, Vol. 1719, pp. 462-471, Nov. 1999.
75. Gulliver, T.A., "Optimal double circulant self-dual codes over GF(4)", *IEEE Trans. Inform. Theory*, Vol. 46, pp. 271-274, Jan. 2000.
76. Gulliver, T.A. and V.K. Bhargava, "New linear codes over GF(8)", *Appl. Math. Lett.*, Vol. 13, No. 2, pp. 17-19, Feb. 2000.
77. Bierbrauer, J. and T.A. Gulliver, "New linear codes over GF(9)", *Austral. J. Comb.*, Vol. 21, pp. 131-140, Mar. 2000.

## 7. PUBLICATIONS

### b. Refereed Journal Publications (cont'd)

78. Dougherty, S.T., T.A. Gulliver and M. Harada, "Optimal formally self-dual codes over  $F_5$  and  $F_7$ ", *Applic. Algebra in Eng., Commun. & Comput.*, Vol. 10, No. 3, pp. 227-236, Mar. 2000.
79. Gulliver, T.A. and V.K. Bhargava, "Some optimal non-binary power residue codes", *Ars Combinatoria*, Vol. 56, pp. 235-245, July 2000.
80. Gulliver, T.A. and M. Harada, "Double circulant self-dual codes over  $GF(5)$ ", *Ars Combinatoria*, Vol. 56, pp. 3-13, July 2000.
81. Gulliver, T.A. and P.R.J. Östergård, "New binary linear codes", *Ars Combinatoria*, Vol. 56, pp. 105-112, July 2000.
82. Daskalov, R. and T.A. Gulliver, "New quasi-twisted quaternary linear codes", *IEEE Trans. Inform. Theory*, Vol. 46, No. 7, pp. 2642-2643, Nov. 2000.
83. Bachoc, C., T.A. Gulliver and M. Harada, "Isodual codes over  $Z_{2k}$  and isodual lattices", *J. Alg. Combin.*, Vol. 12, No. 3, pp. 223-240, Nov. 2000.
84. Gulliver, T.A. and M. Harada, "Codes over  $F_3 + uF_3$  and improvements to the bounds on ternary linear codes", *Des., Codes & Crypt.*, Vol. 22, No. 1, pp. 89-96, Jan. 2001.
85. Gulliver, T.A. and P.R.J. Östergård, "Improvements to the bounds on ternary linear codes of dimension 8 using tabu search", *J. Heuristics*, Vol. 7, No. 1, pp. 37-46, Jan. 2001.
86. Gulliver, T.A., "Reed-Solomon bar codes for mail processing", *The Canadian Philatelist*, Vol. 52, No. 1, Jan.-Feb. 2001.
87. Dougherty, S.T. and T.A. Gulliver, "Higher weights and binary self-dual codes", *Elect. Notes Discrete Math.*, Vol. 6, April 2001.
88. Daskalov, R.N. and T.A. Gulliver "Minimum distance bounds for linear codes over  $GF(7)$ ", *J. Combin. Math. & Combin. Comput.*, Vol. 36, pp. 175-191, 2001.
89. Gulliver, T.A. and N. Senkevitch, "Optimal ternary linear rate 1/2 codes", *Des., Codes & Crypt.*, Vol. 23, No. 2, pp. 167-171, July 2001.
90. Arasu, K.T. and T.A. Gulliver, "Self-dual codes over  $F_p$  and weighing matrices", *IEEE Trans. Inform. Theory*, Vol. 47, No. 5, pp. 2051-2055, July 2001.
91. Daskalov, R.N. and T.A. Gulliver, "New minimum distance bounds for linear codes over small fields", *Probl. Pered. Inform.*, Vol. 37, No. 3, pp. 206-215, July-Sept. 2001.
92. Gulliver, T.A. and M. Harada, "Orthogonal frames in the Leech lattice and a type II code over  $Z_{22}$ ", *J. Combin. Theory Ser. A*, Vol. 95, No. 1, pp. 185-188, Aug. 2001.
93. Rankin, D. and T.A. Gulliver, "Single parity check product codes," *IEEE Trans. Commun.*, Vol. 49, No. 8, pp. 1354-1362, Aug. 2001.

## 7. PUBLICATIONS

### b. Refereed Journal Publications (cont'd)

94. Betsumiya, K., T.A. Gulliver, M. Harada and A. Munemasa, "On type II codes over  $F_4$ ", *IEEE Trans. Inform. Theory*, Vol. 47, No. 6, pp. 2242-2248, Sept. 2001.
95. Gulliver, T.A. and M. Harada, "Optimal double circulant  $Z_4$  codes", *Springer-Verlag Lecture Notes in Computer Science*, Vol. 2227, pp. 122-128, Nov. 2001.
96. Gupta, M.K., D.G. Glynn and T.A. Gulliver, "On senary simplex codes", *Springer-Verlag Lecture Notes in Computer Science*, Vol. 2227, pp. 112-121, Nov. 2001.
97. Reid, A.C., T.A. Gulliver and D.P. Taylor, "Classification of errors in turbo-decoders", *IEEE Trans., Commun.*, Vol. 49, No. 12, pp. 2045-2051, Dec. 2001.
98. Gulliver, T.A., "Sequences from squares of integers", *Int. Math. Journal*, Vol. 1, No. 4, pp. 323-332, 2002.
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22. Esmaeili, M., T.A. Gulliver and N.P. Secord, "Quasi-cyclic structure of Reed-Muller codes and their smallest regular trellis diagram", Technical Report SCE-95-11, Dept. of Systems and Computer Engineering, Carleton University, 31 p., July 1995.
23. Esmaeili, M., T.A. Gulliver and N.P. Secord, "Canonical representation of quasi-cyclic codes", Technical Report SCE-95-24, Dept. of Systems and Computer Engineering, Carleton University, 19 p., Nov. 1995.
24. Esmaeili, M., T.A. Gulliver and N.P. Secord, "On the trellis structure of quasi-cyclic codes", Technical Report SCE-95-25, Dept. of Systems and Computer Engineering, Carleton University, 22 p., 1995.
25. Gulliver, T.A. "Performance of Reed-Solomon codes in Australia Post 4-state bar codes", Report for Australia Post, 21 p., Apr. 1998.
26. Gulliver, T.A. "ARQ protocol for HF frequency-hopping systems", Report for Communications Research Centre, Contract no. U6800-9-0629, 30 p., Oct. 1998.

## 7. PUBLICATIONS

### f. Other Publications (e.g., unrefereed journal and conference papers/ cont'd)

#### Technical Papers and Reports

27. Khosravifard, M., M. Esmaeili, H. Saidi and T.A. Gulliver, "A class of minimum average codes for inequiplorable finite monotone sources", Technical Report ECE-03-01, Dept. of Electrical and Computer Engineering, University of Victoria, Jan. 2003.
28. Danielsen, L.E., T.A. Gulliver and M.G. Parker, "Aperiodic propagation criteria for Boolean functions", ECRYPT Internal Document, STVL-UiB-I-APC-1.0, Aug. 2004.
29. Titchener, M.R., T.A. Gulliver, R. Nicolescu, U. Speidel and L. Staiger, "Deterministic complexity and entropy", Research Report CDMTCS-255, Centre for Discrete Mathematics and Theoretical Computer Science, Dept. of Computer Science, University of Auckland, Dec. 2004.
30. Li, W., T.A. Gulliver and J. Zhong, "System design for connection aware applications over wireless networks with cross-layer design", Telus Contract Report, 23 pages, Sept.. 2006.
31. Gulliver, T.A. and U. Speidel, "On T-codes and necklaces", Research Report CDMTCS-290, Centre for Discrete Mathematics and Theoretical Computer Science, Dept. of Computer Science, University of Auckland, New Zealand, 14 pages, Oct. 2006.
32. Li, W. and T.A. Gulliver, "Cross-layer design for connection aware multimedia applications over wireless networks", Telus Contract Report, 17 pages, Oct. 2007.
33. Li, W. and T.A. Gulliver, "Scheduling algorithms in HSDPA systems", Telus Contract Report, 37 pages, Dec. 2008

## 8. TEACHING DUTIES AT UNIVERSITY OF VICTORIA

### a. Courses Taught

Year	Course	Hours/Week	Term	No. of Students
1989	CSC 250	3	Spring	40
1999	ELEC 350	3	Fall	70
	ELEC 511	3	Fall	7
2000	ELEC 456	3	Spring	35
	ELEC 590	3	Summer	1
	ELEC 590	3	Fall	6
2001	ELEC 456	3	Spring	27
	ELEC 590	3	Spring	3
	ELEC 405	3	Summer	36
	ELEC 590	3	Summer	3
	ELEC 511	3	Summer	4
	ELEC 590	1	Fall	3
2002	ELEC 456	3	Spring	40
	ELEC 590	3	Spring	2
	ELEC 511	3	Summer	9
	ELEC 590	1	Summer	2
2003	ELEC 590	1-2	Fall	10
2004	ELEC 590	1	Spring	4
	ELEC 590	1	Summer	1
	ELEC 590	1	Fall	1
2005	ELEC 360	3	Spring	6
	ELEC 405	3	Spring	7
	ELEC 590	1	Summer	2
	ELEC 619A	3	Fall	9
2006	ELEC 360	3	Spring	24
	ELEC 405	3	Spring	14
2007	ELEC 350	3	Fall	73
	ELEC 619A	3	Fall	15
2008	ELEC 405	3	Spring	12
	ELEC 590	1	Spring	1
	ELEC 619A	3	Fall	18
	ELEC 590	1	Fall	1
2009	ELEC 405	3	Spring	16
	ELEC 590	1-2	Spring	2

## 8. TEACHING DUTIES AT UNIVERSITY OF VICTORIA

### b. Short Courses Taught

Year	Course	Hours/Week	Term	No. of Students
Nil				

## 9. GRADUATE STUDENT SUPERVISION

### a. Ph.D. Students Graduated

Year	Student	Thesis Title
1996	Amir Bigloo Carleton University	Spread Spectrum Multiple Access with Packet Combining
1996	Morteza Esmaeili Carleton University	Graphical Properties of Quasi-Cyclic Codes
1997	Michael Moher Carleton University	Cross-Entropy and Iterative Detection
2001	David Rankin Univ. of Canterbury	Single Parity Check Product Codes and Iterative Decoding
2002	Andrew Reid Univ. of Canterbury	Turbo Codes; Convergence Phenomena and Non-binary Constructions
2003	Zeljko Blazek	On Lowering the Error-Floor of Low-Complexity Turbo-Codes
2004	Hao Zhang	Capacity and Error Probability Analysis for Space Time Block Codes and Pulse Position Amplitude Modulation Ultra Wideband Communication Systems
2004	Wei Li	On Diversity in Wireless Communications
2004	Mohammadali Khosravifard (Isfahan University of Technology, Iran)	Some Codes for Finite Monotone Sources
2006	Mo-Han Fong	Medium Access Control for Beyond Third Generation Heterogeneous Wireless Networks
2006	Ubolthip Sethakaset	Modulation and Coding Techniques for Infrared Wireless Local Area Networks
2008	Abolfazl Ghassemi	IFFT-Based Techniques for Peak Power Reduction in OFDM Communication Systems

## 9. GRADUATE STUDENT SUPERVISION

### b. Master's Students Graduated

<b>Year</b>	<b>Student</b>	<b>Degree Program</b>	<b>Thesis Title</b>
1995	Winnie Lin Carleton University	M.Eng.	Generalized Linear Anticodes and Optimum Error-Correcting Codes
1995	Welly Firmanto Carleton University	M. Eng.	Code Combining of Reed-Muller Codes in an Indoor Wireless Environment
1996	Donna Spilchen Carleton University	M. Eng.	Diversity Combining for M-ary Fast Frequency Hopping in a Multiple Access Rayleigh Fading Channel
1999	Kamal Al-Sabbagh Univ. of Canterbury	M. Eng.	Bandwidth Efficient Turbo-Codes Using Bayesian Networks
1999	Boon Hwang Univ. of Canterbury	M. Eng.	Minimal Trellis Structures for Linear Codes
2000	Nikolai Senkevitch Univ. of Canterbury	M. Eng.	Classification of Optimal Linear Rate 1/2 Codes over Small Fields
2000	Anthony Lineham Univ. of Canterbury	M. Eng.	Heuristic S-Box Design
2000	Jonathan Kong Univ. of Canterbury	M. Eng.	Weight Patterns and Interleaver Design for Parallel Concatenated Convolutional Codes
2000	Torrens Moore Univ. of Canterbury	M.Eng.	Software Decoding of Reed-Solomon Codes
2000	Steward Ting Univ. of Canterbury	M.Eng.	A Dual-Tone Non-coherent Frequency-Hopped Spread Spectrum System
2001	Nicholas Pau Univ. of Canterbury	M.Eng.	Effect of 4-Cycles on Low Density Parity Check Codes
2001	Shyh-Hao Kuo Univ. of Canterbury	M.Eng.	Chaos-based Pseudo-random Bit Stream Generator for Cryptographic Applications
2001	Michael Bandsmer	M.A.Sc.	Efficient Decoding of Low Density Parity Check Codes and Irregular Repeat Accumulate Codes Over $GF(2^m)$
2002	John N.C. Wong	M.A.Sc.	Classification of Small Optimal Codes Over $Z_4$

## 9. GRADUATE STUDENT SUPERVISION

### b. Master's Students Graduated (cont'd)

<b>Year</b>	<b>Student</b>	<b>Degree Program</b>	<b>Thesis Title</b>
2003	Neil L. Carson	M.A.Sc.	Peak-to-Average Power Ratio Reduction of OFDM Symbols
2003	Massoud Ghassemi	M.A.Sc.	Efficient Implementation of Turbo Decoders for Software Defined Radio
2003	Yousry Abdel-Hamid	M.A.Sc.	Accessing Multiple Mirror Sites in Parallel
2004	William Chow	M.A.Sc.	Concatenated Space-Time Block Codes and Turbo Codes with Unstructured Interference
2004	Caner Budacoglu	M.A.Sc.	Key Management for Mobile Ad-Hoc Networks
2004	Katayoun Farrahi	M.A.Sc.	Robust H.264/AVC Video Transmission in 3G Packet-Switched Networks
2004	Majid Khabbazian	M.A.Sc.	Software Elliptic Curve Cryptography
2004	Omar Farooq	M.A.Sc.	Performance of Space-Time Trellis Codes in Fading Channels
2005	Yihai Zhang	M.A.Sc.	Quality of Service for Ad hoc On-Demand Distance Vector Routing
2005	Yong-Sheng Shi	M.A.Sc.	An Energy Efficient MAC Protocol for Ad-Hoc Networks
2006	Hanfeng Chen	M.A.Sc.	Performance of Ultra-Wideband Communications Systems using DS-PPM with BCH Coding
2007	Shiva Kumar Planjery	M.A.Sc.	Design of Rate-Compatible Punctured Repeat Accumulate Codes
2008	Xiao Liang	M.A.Sc.	On Wireless Sensor Networks
2008	Fengdan Wan	M.A.Sc.	Traffic Modeling and Performance Analysis for IPTV Systems

## 9. GRADUATE STUDENT SUPERVISION

### b. Master's Students Graduated (cont'd)

2009	Behzad Bahr-Hosseini	M.A.Sc	Performance of Orthogonal and Non-Orthogonal TH-PPM for Multi-User UWB Communication Systems
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## 9. GRADUATE STUDENT SUPERVISION

### c. Ph.D. and Master's Students Currently Under Supervision

<b>Year(s)</b>	<b>Student</b>	<b>Degree Program</b>
2003-	Carlos Quiroz-Perez	M.A.Sc.
2008-	Saleh Almowuena	M.A.Sc.
2008-	Najmeh Khosrashahi	M.A.Sc.
2009-	Samaan Pourtavakoli	M.A.Sc.
2009-	Ahmed Altimini	M.A.Sc.
2009	Bojiang Ma	M.A.Sc.
2008-	Zabnan Al Dossory	M.Eng.
2008-	Weixiao Li	M.Eng.
2004-	Yousry Abdel-Hamid	Ph.D.
2004-	Yihai Zhang	Ph.D.
2005-	Ahmed Abubaker	Ph.D.
2005-	Khalid Al-Muzaini	Ph.D.

## 9. GRADUATE STUDENT SUPERVISION

### d. Other Related Activities (Member of supervisory committee, chairman of examination committee, external examiner)

Year(s)	Student	Degree Program	Thesis Title
1992	K. Anand (Chair of Examination Committee)	M.Eng.	FEC and Priority of VBR Video Distribution Over ATM
1992	Claude D'Amours (External Examiner)	M.Eng.	Differential and Coherent RAKE Receivers for DS-CDMA in Frequency-selective Rayleigh Fading Channels
1992	Anwarul Hasan (External Examiner)	Ph.D.	Efficient Computations in Galois Fields
1992	Erik W. Dravnieks (Member of Examining Board)	Ph.D.	Practical Global Optimization
1992	Sean A. Faulkner (Member of Examining Board)	Ph.D.	Composite Sequences for Rapid Acquisition of Direct-Sequence Spread-Spectrum Signals
1993	Guy J.M. Ferland (External Examiner)	M.Eng	Error Rate Performance Analysis of Stream and Block Ciphers in a Digital Mobile Communication Channel
1993	N. Trif (External Examiner)	M.Eng.	Model-Based Visual Recognition of 3-D Objects Using Pseudo-Random Grid Encoding
1993	Chang G. Zhang (Chair of Examining Board)	M.Eng.	Traffic handling Capability Study of a Broadband Indoor Wireless System Using CDMA Multiple Access
1993	Richard Brunet (Member of Examining Board)	Ph.D.	On the Homotopy of Polygons in Graph Embeddings
1994	Norman M. Filiol (Member of Examining Board)	M.Eng.	Interpolated Frequency-Hopping Spread-Spectrum Transceiver System
1994	Todd P. McDermott (Member of Examining Board)	M.Eng.	Personal Communication Networks and Call Interception for Law Enforcement

## 9. GRADUATE STUDENT SUPERVISION

### d. Other Related Activities (Member of supervisory committee, chairman of examination committee, external examiner)

Year(s)	Student	Degree Program	Thesis Title
1994	Manop Thamsirianunt (Member of Examining Board)	M.Eng.	The Design and Implementation of CMOS Components for a Gigahertz Frequency Synthesizer
1994	Xiaoyu Wang (Member of Examining Board)	M.Eng.	System Performance Analysis with $\pi/4$ -QPSK in an Outdoor Wireless Environment
1994	Ahmad Chini (Member of Examining Board)	Ph.D.	Multi Carrier Modulation in Frequency-selective Fading Channels
1994	Norman W.K. Lo (Member of Examining Board)	Ph.D.	Adaptive Equalization for a Multipath Fading Channel in the Presence of Interference
1995	Gary Chang (Member of Examining Board)	M.Eng.	System Identification and Control of Thermo-Mechanical Pulping Refiner
1995	Olivier Guieu (Member of Examining Board)	M.Eng.	Analyzing Infeasible Mixed-Integer and Integer Linear Programs
1995	Caroline Tom (Member of Examining Board)	M.Eng.	Investigation and Implementation of a Computationally-efficient Algorithm for Cyclic Spectral Analysis
1995	Marc H. Trichard (External Examiner)	M.Eng.	Study of Trellis Coded Modulation and Error Control Coding
1995	Victor Aitken (Member of Examining Board)	Ph.D.	Sliding Mode State Estimation for Nonlinear Discrete-time Systems: Applications in Image Sequence Analysis
1995	Jian Cui (Chair of Examining Board)	Ph.D.	The Application of Blind Adaptive Antenna Arrays to Digital Wireless Communication Systems
1995	Ming Jia (External Examiner)	Ph.D.	Capability of Permutation Decoding of Cyclic Codes

## 9. GRADUATE STUDENT SUPERVISION

### d. Other Related Activities (Member of supervisory committee, chairman of examination committee, external examiner)

Year(s)	Student	Degree Program	Thesis Title
1995	Frank M. Van Heeswyk (Member of Examining Board)	Ph.D.	Linear Memoryless Detection of Quasi-Synchronous CDMA
1996	Maamoun Abou-Seido (Member of Examining Board)	M.Eng.	Design and Analysis of CMOS Monolithic Inductor-less Voltage Controlled Oscillators
1996	Richard Farley (Member of Examining Board)	M.Eng.	Comparison of Coded Diversity Combining Techniques in Packetized Digital Wireless Systems
1996	Mohamed El Tarhuni (Chair of Examining Board)	Ph.D.	Application of Adaptive Filtering to Direct-Sequence Spread-Spectrum Code Synchronization
1996	Ronald W. Kerr (External Examiner)	Ph.D.	Convolutional Ring Codes for Fading Channels
1997	Raymond W.M. Chan (External Examiner)	Ph.D.	Variable Length Error Control Codes
1997	Mathew Hebley (Chair of Examination Committee)	Ph.D.	Generalized Linear Diversity Receivers for Wireless TDMA Systems
1998	A.C.M. Fong (External Examiner)	Ph.D.	Analysis of the Synchronization Properties of T-Codes
1998	Ulrich M. Guenther (External Examiner)	Ph.D.	Robust Source Coding with Generalized T-Codes
1998	Ricky Leung (External Examiner)	M.Eng.	Analysis of Low-Speed Modem Communication Over Radio Channels
1998	Kevin Taylor (Chair of Examination Committee)	Ph.D.	Enhanced PAL Television Coding
1999	M.C. Chen (External Examiner)	M.Sc.	Producing Strings with Specified Information Rates

## 9. GRADUATE STUDENT SUPERVISION

### d. Other Related Activities (Member of supervisory committee, chairman of examination committee, external examiner / cont'd)

Year(s)	Student	Degree Program	Thesis Title
1999	Thirumalainambi Murugesh (External Examiner)	Ph.D.	Cryptographically Secure Random Number Generators
1999	Yong-Hoon Yoon (Member of Supervisory Committee)	Ph.D.	High-rate Digital Acoustic Communications in a Shallow Water Channel
2001	Bridget Walshe (External Examiner)	M.Sc.	Aspects of Order, Relative Primeness and Quotient Ring Structure for Polynomials Over Integer Rings
2001	Tao Cao (Chair of Examination Committee)	M.Sc.	Computing all the Simple Symmetric Monotone Venn Diagrams on Seven Curves
2001	John Foxgord (External Examiner)	M.Sc.	Application Level Resource Management for the IEEE 1394
2001	Stan Burns (External Examiner)	M.A.Sc.	Design and Modeling of an Electrostrictive Inchworm Actuator
2001	Xai Wei (External Examiner, Nanyang Tech. University)	M.Eng.	Performance Analysis of Reed-Solomon Coded Fast FH MFSK Systems with Multi-tone Jamming and AWGN Over Fading Channels
2001	Jing Wang (Member of Examining Committee, Simon Fraser University)	Ph.D.	Blind Multiuser Detection Algorithms for Time-Varying Channels with Diversity Antenna Arrays
2002	Sen-Hu Yu (External Examiner)	M.Eng.	Subspace Speech Enhancement
2002	Dejan Djonin Member of Supervisory Committee)	Ph.D.	Multiuser Receivers in Fading Channels
2003	Jackie Rice (Member of Supervisory Committee)	Ph.D.	An Analysis of the Properties of Boolean Functions and their Representations Based on Auto-correlation Coefficients

## 9. GRADUATE STUDENT SUPERVISION

### d. Other Related Activities (Member of supervisory committee, chairman of examination committee, external examiner / cont'd)

Year(s)	Student	Degree Program	Thesis Title
2003	Daniela Djonin (Member of Supervisory Committee)	M.A.Sc.	Some Issues on Packet-based Communications
2003	Bryce Jensen (Member of Supervisory Committee)	M.A.Sc.	Multimedia Transmission over GPRS Networks using H.323 Based Signaling
2003	Shuya Xiao (Member of Supervisory Committee)	M.A.Sc.	Effects of Vessel Motion on Echo Sounding in Fisheries
2003	Jahangir Hossain (Member of Supervisory Committee)	M.A.Sc.	Applications of Hierarchical Constellations for Multimedia Transmission over Fading Channels
2003	M.A. Khayes Akanda (External Examiner)	M.Sc.	A System of Patterns for Web Navigation
2003	P.R. Nimalsiri (External Examiner, Royal Melbourne Institute of Technology)	M.Sc.	Simplex and Cocyclic Codes
2003	Zhiwei Mao (Member of Supervisory Committee)	Ph.D.	Some Issues on Multiuser Detection in DS-CDMA Systems
2004	Luc Sibeud (External Examiner, University of Canterbury)	M. Eng.	High Speed Communication Link for Multiple Hydrophone Synthetic Sperature Radar
2004	Poramate Tarasak (Member of Supervisory Committee)	Ph.D.	Improving Performance of Differential Space-Time Block Codes
2004	Kang Jin-Jun (External Examiner, Nanyang Technological University)	M.Eng	Performance Analyses of Coherent Fast FHSS/MPSK Systems over Non-Fading and Fading Channels with Partial Band Noise Jamming and AWGN

## 9. GRADUATE STUDENT SUPERVISION

### d. Other Related Activities (Member of supervisory committee, chairman of examination committee, external examiner / cont'd)

Year(s)	Student	Degree Program	Thesis Title
2004	Jeff Hornsburger (External Examiner)	M.Sc.	Geographic Grid Routing for Wireless Sensor Networks
2005	David Cruz (Chair of Oral Examination)	M.A.Sc.	Design of an Innovative Car Braking System Using Eddy Currents
2005	Joana Rocha (Chair of Oral Examination)	M.A.Sc.	An Experimental Study and Flight Testing of Active Aeroelastic Aircraft Wing Structures
2005	Yajun Kou (Member of Supervisory Committee)	Ph.D.	Peak-to-Average Power Ratio and Intercarrier-Interference Reduction Algorithms for Orthogonal Frequency-Division Multiplexing Systems
2005	Armando Tura (External Examiner)	M.A.Sc.	Active Magnetic Regenerator Experimental Optimization
2005	Greg Iuzzolino (External Examiner)	M.A.Sc.	Design of a Vehicular LNG Fuel Storage Vessel
2005	Jia Yang (External Examiner, University of Auckland)	Ph.D.	Fast String Parsing and its Application in Information and Similarity Measurement
2005	Fengqin Zhai (External Examiner, University of Alberta)	Ph.D.	DC-Free Error-Control Codes
2006	Alexander M. Hoole (Member of Supervisory Committee)	M.A.Sc.	Flexible Owner Retained Access Control for Document Management Systems
2006	Trevor B. Haynes (Chair of the Oral Examination)	M.Sc.	Modeling Habitat Use of Young-of-the-Year Pacific Sand Lance ( <i>Ammodytes hexapterus</i> ) in the Nearshore Region of Barkley Sound, British Columbia

## 9. GRADUATE STUDENT SUPERVISION

### d. Other Related Activities (Member of supervisory committee, chairman of examination committee, external examiner / cont'd)

Year(s)	Student	Degree Program	Thesis Title
2006	Markku Liinajarja (External Examiner, Helsinki University of Technology)	Ph.D.	Studies on the Performance of Some ARQ Schemes
2006	Han Yi (External Examiner, Nanyang Technological University)	Ph.D.	Performance Analyses of Fast Frequency-Hopped Communication Systems Against Multitone Jamming and Multiple-Access Interference
2006	Celina Gibbs (External Examiner)	M.Sc.	Sustainable System Infrastructure and Big Bang Evolution: Can Aspects Keep Pace?
2006	Yue Wang (Member of Supervisory Committee)	Ph.D.	Single Carrier Block Transmission in Ultra-Wideband
2006	Nicolai Moles-Benfell (External Examiner, University of Auckland)	M.Sc.	The Use of Production Complexity in the Cryptanalysis of Block Ciphers
2007	Ge Li (External Examiner, University of Alberta)	Ph.D.	Design, Analysis, and Application of Nonbinary Low-Density Parity-Check (LDPC) Codes
2007	Justin Blanchfield (External Examiner)	M.A.Sc.	The Extractable Power from Tidal Streams Including a Case Study for Haida Gwaii
2007	David Guindon (Member of Supervisory Committee)	M.A.Sc.	Design of Nearly Linear-Phase Recursive Digital Filters by Constrained Optimization
2007	Ali Al-Shaikhi (External Examiner, Dalhousie University)	Ph.D.	Innovative Designs and Deployments of Erasure Codes in Communication Systems
2007	Nevine Maurice Ebeid (External Examiner, University of Waterloo)	Ph.D.	Power Analysis Attacks on Elliptic Curve Cryptosystems and Key Randomization Measures

## 9. GRADUATE STUDENT SUPERVISION

### d. Other Related Activities (Member of supervisory committee, chairman of examination committee, external examiner / cont'd)

Year(s)	Student	Degree Program	Thesis Title
2007	Jason Peebles (Chair of the Oral Examination)	M.Sc.	The Toeplitz C*-Algebra of the Semigroup of Principal Ideals in a Number Field
2008	Jing Zhong (Member of Supervisory Committee)	Ph.D.	A New Fault Model and Its Application in Synthesizing Toffoli Networks
2008	Chris Ware (External Examiner)	M.Sc.	Modeling and Verification of Quantum Cryptographic Protocols
2008	Lior Malka (Member of Supervisory Committee)	Ph.D.	A Study of Perfect Zero-Knowledge Proofs
2008	Emad Soroush (External Examiner)	M.Sc.	Fast Data Streaming in Resource Constrained Wireless Sensor Networks
2008	Terasan Niyomsataya (External Examiner, University of Ottawa)	Ph.D.	On Designs and Fast Decoding Algorithms of Space-Time Codes and Group Codes
2008	Susan L. Myskow (Chair of the Oral Examination)	M.A.	Sustainability in Canadian and Indigenous Environmental Policy-Making
2009	Li Jin (External Examiner)	M.A.Sc	The Transmitted Reference Pulse Cluster System for Ultra-Wideband Communications
2009	Nicola Roberts (Chair of the Oral Examination)	M.Sc.	Effect of Salmon Farms on Element Concentrations and Stable Isotopes in Manila Clams and Sediment in Clayoquot Sound, British Columbia

**10. GRANTS AND FUNDINGS FROM ALL AGENCIES INCLUDING UNIVERSITY OF VICTORIA**

**a. Grants (e.g., NSERC, SCBC, etc.)**

<b>Year(s)</b>	<b>Amount</b>	<b>Source</b>	<b>Title</b>
1991	\$15,000	Carleton University	Startup grant
1992	\$ 4,000	Carleton University	Coding and Sequence Design for FH/SS
1992	\$ 2,000	NSERC (Conference)	Canadian Workshop on Information Theory
1991-93	\$14,000	NSERC (Operating)	Reed-Solomon Coding Sequence Design for Frequency Hopped Systems
1993	\$ 5,000	Carleton University	Trellis Decodable Block Codes
1993-97	\$98,000	Telecommunications Research Institute of Ontario	Diversity and Coding for Fading Channels
1994	\$ 5,000	Carleton University	Error Control Coding
1994-97	\$18,720	NSERC (Operating)	Error Control Coding for Robust and Efficient Communications
1996	NZD\$15,000	University of Canterbury	Academic startup grant
1996	NZD\$3,000	University of Canterbury	Travel grant
1997	NZD\$3,500	University of Canterbury	Travel grant
1997	NZD\$5,000	University of Canterbury	Research computer
1998	NZD\$3,500	University of Canterbury	Travel grant
1998	NZD\$3,000	University of Canterbury	Research software
1998-2004	NZD \$313,000	Public Good Science Fund (New Zealand)	Mobile Telecommunications Systems Transmission Engineering
1999	\$25,000	University of Victoria	Startup grant
1999-2002	NZD \$57,000	Marsden Fund (NZ)	Ring and Multi-level Turbo Codes: Coding to Approach Channel Capacity

**10. GRANTS AND FUNDINGS FROM ALL AGENCIES INCLUDING UNIVERSITY OF VICTORIA (cont'd)**

**a. Grants (e.g., NSERC, SCBC, etc.) / cont'd**

<b>Year(s)</b>	<b>Amount</b>	<b>Source</b>	<b>Title</b>
2000-03	NZD\$125,000	Marsden Fund (NZ)	Quantum Error Correction
2000-05	\$26,350	NSERC (Discovery)	Iterative Decoding with Codes over Rings and Fields
2000	\$39,980	NSERC(Equipment)	Network for Distributed Computing and Communications Simulation
2000-01	\$2,173	University of Victoria	Faculty Research Grant
2001-04	AUD\$98,000	Australian Research Council	Coding and Signal Design Techniques for Reducing Signal Peaks and Interference
2002-03	\$1,993	University of Victoria	Faculty Research Grant
2005-08	\$46,000	NSERC (Discovery)	Ultra-Wideband Communications
2006-	\$725	University of Victoria	UVic IRG Top-Up Award
2005-09	\$1,050	University of Victoria	Travel Grant
2008-11	NOK 1,565,000	Research Council of Norway	Hybrid Quantum Computers
2008-13	\$44,828	NSERC (Discovery)	Wireless Multimedia Communications

**b. Research Contracts**

<b>Year(s)</b>	<b>Amount</b>	<b>Source</b>	<b>Title</b>
2004-07	\$40,000	Telus	Connection Aware Applications
2008	\$40,000	Telus	Scheduling Algorithm Design for UTRA Systems

**c. Other (e.g., research consultancies)**

<b>Year(s)</b>	<b>Amount</b>	<b>Source</b>	<b>Title</b>
2006-07	US \$7,000	France Telecom	Ultra-Wideband Technology
2007-08	US \$10,000	France Telecom	Ultra-Wideband Technology

## **11. ADMINISTRATIVE ACTIVITIES (Committee and Service Activities)**

### **a. University and Faculty Committees (Include dates of offices held)**

<b>Year(s)</b>	<b>Committee</b>
1987	Search Committee for Chairman of Mechanical Engineering
1996-98	Liaison Committee
1999-	Expansion and Development Committee
2001	Software Engineering LOI Committee
2002	Faculty Advisory Committee
2002	Software Engineering Curriculum Committee
2002	Search Committee for Associate Dean
2004	Search Committee for Associate Dean Research
2005	Lieutenant Governor's Medals Awards Committee
2005-6	Space Reassignment Committee
2006	Faculty Evaluation Task Force Committee
2007	Search Committee for ECE Chair
2007-8	Search Committee for Dean of Engineering

### **b. Department Committees and Responsibilities (Include dates of offices held)**

<b>Year(s)</b>	<b>Committee</b>
1992	Tenure and Promotion Committee
1996-99	Computer Committee
1996-99	1 <sup>st</sup> Professional Year Coordinator
1997	Promotion Committee
1999 – 2002	Curriculum Committee
1999 - 2002	Electrical Engineering Program Coordinator
2002	Electrical Engineering Appointments Subcommittee

## 11. ADMINISTRATIVE ACTIVITIES (Committee and Service Activities)

### b. Department Committees and Responsibilities (Include dates of offices held/cont'd)

<b>Year(s)</b>	<b>Committee</b>
2004	Ad-Hoc Committee on Accreditation (Chair)
2004-2005	Communications/Electromagnetics Appointments Subcommittee
2005	Acting Director, Electrical Engineering Program
2005-2006	Curriculum Committee (Chair, 2005)
2005-2006	Equipment Committee
2006	Advisory Committee on Space
2007	Chair, Promotion to Associate Professor and Tenure Committee
2007-	Graduate Studies Committee
2007-08	CRC Replacement Appointments Subcommittee
2008-	Graduate Advisor
2008-	Curriculum Committee

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

<b>Year(s)</b>	<b>Committee/Organization</b>
1987	Local Arrangements Chair, Inaugural IEEE Pacific Rim Conference on Communications, Computers and Signal Processing
1988	Chair, IEEE Victoria Conference on Communications
1989	Technical Program Coordinator, Canadian Workshop on Information Theory
1990	Director of Publications and Technical Program Coordinator, Canadian Conference on Electrical and Computer Engineering
1991	Session Organizer and Chairperson, IEEE Military Communications Conference
1992-93	IEEE Region 7 Chapter Activities Coordinator
1992-93	IEEE Region 7 E-mail Coordinator
1993	Co-Chair, Canadian Workshop on Information Theory

**11. ADMINISTRATIVE ACTIVITIES (Committee and Service Activities / cont'd)**

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

<b>Year(s)</b>	<b>Committee/Organization</b>
1995	Member, International Advisory Committee of the IEEE International Symposium on Personal, Indoor and Mobile Radio Communications
1995	Registration Chair, IEEE International Symposium on Information Theory
1996	Member, Technical Program Committee of the International Symposium on Information Theory and Its Applications
1996	Member, Technical Program Committee of the IEEE International Symposium on Spread Spectrum Techniques and Applications
1996	Session Organizer and Chairperson for the IEEE Military Communications Conference
1996-99	Member, Executive Committee, IEEE New Zealand South Section Chair of Technical Program and Membership Development Committees
1996	Member, International Advisory Committee of the IEEE International Symposium on Spread Spectrum Techniques and Applications
1998	Member, Technical Program Committee of the IEEE Vehicular Technology Conference
1998	Member, Technical Program Committee of the IEEE International Symposium on Spread Spectrum Techniques and Applications
1998	Member, Technical Program Committee of the Asia Pacific Mobile Communications Symposium
1998	Member, International Scientific Committee for the 3 <sup>rd</sup> IMACS International Conference on Circuits, Systems, Communications and Computers
1998-99	Founding Chairman, Communications Chapter, IEEE New Zealand North & South Sections
1999	Local Arrangements Chair, IEEE Pacific Rim Conference on Communications, Computers and Signal Processing
1999	Member, Mathematical & Information Sciences Committee, The Marsden Fund, New Zealand
2001	General Co-Chair, IEEE Pacific Rim Conference on Communications, Computers and Signal Processing

**11. ADMINISTRATIVE ACTIVITIES (Committee and Service Activities / cont'd)**

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

<b>Year(s)</b>	<b>Committee/Organization</b>
2001	Member, NSF Career Awards Panel
2001	Member, NSF Career Awards Panel
2002	Co-Chair, Technical Program, IEEE International Symposium on Advances in Wireless Communication
2002	Publications Chair, IEEE Vehicular Technology Conference
2002	Member, NSF Electrical and Communications Systems Panel
2003	Co-Chair, IEEE International Workshop on Information Theory, Paris, France
2004	Member, International Program Committee, IASTED International Conference on Communications, Internet and Information Technology
2004	Member, Technical Program Committee, International Symposium on Information Theory and its Applications
2004	Session Chair, IEEE Wireless Communications and Networking Conference
2004	Session Chair, IEEE International Symposium on Information Theory
2004	Session Chair, IEEE Fall Vehicular Technology Conference
2005	Member, Technical Program Committee, Canadian Workshop on Information Theory
2005	Session Chair, Canadian Workshop on Information Theory
2005	Member, Technical Program Committee, IEEE International Symposium on Wireless Quality-of-Service
2005	Member, Technical Program Committee, IEEE Information Theory Workshop on Coding and Complexity
2005	General Co-Chair, IEEE Pacific Rim Conference on Communications, Computers and Signal Processing
2005	Member, Technical Program Committee, IEEE International Conference on Wireless Networks, Communications and Mobile Computing
2005	Member, Technical Program Committee, IEEE Global Telecommunications Conference

## 11. ADMINISTRATIVE ACTIVITIES (Committee and Service Activities / cont'd)

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

<b>Year(s)</b>	<b>Committee/Organization</b>
2005	Member, Technical Program Committee, IASTED International Conference on Communications, Internet and Information Technology
2005	Member, Paper Award Committee, IEEE Information Theory Society
2005	Member, Technical Program Committee, IEEE International Symposium on Wireless Systems and Networks
2005	Member, Technical Program Committee, International Conference on Web Information Systems and Technologies
2005	Member, Technical Program Committee, IEEE International Conference on Next-Generation Wireless Systems
2006	Member, Technical Program Committee, International Conference on Web Information Systems and Technologies
2006	Member, International Program Committee, IASTED International Conference on Wireless Networks and Emerging Technologies
2006-	<b>Editor</b> , IEEE Transactions on Wireless Communications
2006-	<b>Editor</b> , International Mathematical Forum
2006	Session Chair, IEEE Spring Vehicular Technology Conference
2006	Session Chair, IEEE Fall Vehicular Technology Conference
2006	Session Chair, IEEE International Symposium on Information Theory
2006	Member, International Program Committee, IASTED International Conference on Communications, Internet and Information Technology.
2007-	<b>Editor</b> , International Journal of Algebra
2007-	<b>Editor</b> , International Journal of Information and Coding Theory
2007	Member, Technical Program Committee, Canadian Workshop on Information Theory
2007	Finance Chair, Canadian Conference on Electrical and Computer Engineering
2007	Member, Technical Program Committee, IEEE Wireless Communications and Networking Conference

**11. ADMINISTRATIVE ACTIVITIES (Committee and Service Activities / cont'd)**

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

<b>Year(s)</b>	<b>Committee/Organization</b>
2007	Advisory Chair and Registration Chair, IEEE Pacific Rim Conference on Communications, Computers and Signal Processing
2007	Member, International Program Committee IASTED International Conference on Wireless and Optical Communications
2007	Member, International Program Committee, IASTED International Conference on Communications, Internet and Information Technology
2007	Member Technical Program Committee, Communications Networks and Services Research Conference
2007	Session Chair, IEEE Wireless Communications and Networking Conference
2007	Member, Technical Program Committee, International Symposium on Signals, Systems and Electronics
2007	Member, Technical Program Committee, International Conference on Web Information Systems and Technology
2007	Chair, NSERC Industrial Research Chair Site Visit Committee, McGill University
2008	Member, Technical Program Committee, IEEE International Conference on Communications
2008	Member, Technical Program Committee, IEEE Global Communications Conference
2008	Co-Chair, Technical Program, IEEE Wireless Communications and Networking Conference
2008	Co-Chair, Technical Program, Communications Networks and Services Research Conference
2008	Member, Technical Program Committee, Canadian Conference on Electrical and Computer Engineering
2008	Member, Technical Program Committee, IEEE International Instrumentation and Measurement Technology Conference
2008	Member, Technical Program Committee, International Conference on Web Information Systems and Technologies

## 11. ADMINISTRATIVE ACTIVITIES (Committee and Service Activities / cont'd)

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

- 2008 Member, Technical Program Committee, IASTED International Conference on Wireless and Optical Communications
- 2008 Member, Technical Program Committee, International Symposium on Information Theory and its Applications
- 2009 Member, Technical Program Committee, IEEE International Conference on Communications
- 2009 Member, Technical Program Committee, IEEE Wireless Communications and Networking Conference
- 2009 Co-Chair, IEEE Pacific Rim Conference on Communications, Computers and Signal Processing
- 2009 Member, Technical Program Committee, Canadian Workshop on Information Theory
- 2009 Member, Technical Program Committee, Canadian Conference on Electrical and Computer Engineering
- 2009 Member, Technical Program Committee, IEEE International Instrumentation and Measurement Technology Conference
- 2009 Member, Technical Program Committee, International Conference on Web Information Systems and Technologies
- 2009- **Editor**, International Journal of Vehicular Technology
- 2009 Member, Technical Program Committee, IEEE International Conference on Wireless Communications and Signal Processing
- 2009 Member, Technical Program Committee, IEEE Global Communications Conference
- 2010 Member, Technical Program Committee, Queen's Biennial Symposium on Communications
- 2010 Member, Technical Program Committee, International Conference on Web Information Systems and Technologies
- 2010 Member, Technical Program Committee, IEEE International Conference on Communications

**11. ADMINISTRATIVE ACTIVITIES (Committee and Service Activities / cont'd)**

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

- |      |   |
|------|---|
| 2010 | Member, Technical Program Committee, IASTED International Conference on Automation, Control and Information Technology-Information and Communication Technology |
| 2010 | Member, Technical Program Committee, IEEE Global Communications Conference  |

## 12. PROFESSIONAL CONTRIBUTIONS AND ACTIVITIES

### a. Guest Lectures, Invited Talks and Other Presentations

<b>Date</b>	<b>Title</b>	<b>Occasion</b>
March 1988	The Power Residue Codes and Related Quasi-Cyclic Codes	University of British Columbia, Vancouver, BC
April 1988	Coding for Frequency Hopped Spread Spectrum Satellite Communications	Communications Research Centre, Ottawa, ON
May 1989	Primitive Polynomials with Independent Roots and the Normal Basis Theorem	University of Victoria, Victoria, BC
June 1989	Error Correcting Codes for Communications Systems	Royal Roads Military College, Victoria, BC
July 1989	Some Properties of Self-Reciprocal Polynomials	University of Victoria, Victoria, BC
March 1990	Moment Methods for Diversity Combining of Fast Frequency Hopped Non-coherent MFSK	Royal Roads Military College, Victoria, BC
April 1990	Moment Methods for Diversity Combining of Fast Frequency Hopped Non-coherent MFSK	University of Victoria, Victoria, BC
December 1990	Self-Reciprocal Polynomials and Generalized Format Numbers	University of Victoria, Victoria, BC
December 1990	Improving the ECCM Performance of Fast Frequency Hopping by Diversity Combining	University of Toronto, Toronto, ON
May 1991	Improving the ECCM Performance of Fast Frequency Hopping by Diversity Combining	Carleton University, Ottawa, ON
October 1991	Robust Diversity Combining for Improved Performance with Fast Frequency Hopping	University of Victoria
December 1991	Spread Spectrum for Security	Information Security Seminar, Ottawa, ON

## 12. PROFESSIONAL CONTRIBUTIONS AND ACTIVITIES

### a. Guest Lectures, Invited Talks and Other Presentations (cont'd)

April 1992	The Performance of Diversity Combining for Fast Frequency Hopped NCMFSK in Rayleigh Fading	University of Victoria, Victoria, BC
April 1992	Digital Telephony	Binary Communications Inc., Ottawa, ON
April 1993	Coding for Frequency Hopped Spread Spectrum Satellite Communications	Communications Research Centre, Ottawa, On
April 1993	Digital Telephony	Binary Communications In., Ottawa, ON
February 1994	Constructing Good Linear Block Codes	Dept. of Mathematics & Statistics, Carleton University
October 1994	Principles of Error Control Coding for Communications Systems	Tutorial, IEEE Military Communications Conference, Ft. Monmouth, NJ
October 1996	Gradient Techniques for Diversity Combining of Fast Frequency- Hopped MFSK Spread Spectrum Communications	Dept. of Elec. & Elect. Eng., University of Canterbury, Christchurch, New Zealand
June 1998	Reed-Solomon Bar Codes for Mechanized Mail Processing	Dept. of Elec. & Elect. Eng., University of Canterbury, Christchurch, New Zealand
January 1999	Reed-Solomon Bar Codes for Mechanized Mail Processing	Dept. of Elec. & Computer Eng., University of Victoria, Victoria, BC
July 2000	Optimal Linear Rate 1/2 Codes	Dept. of Math & Stats, University of Canterbury Christchurch, New Zealand
November 2001	Higher Weights and Self-Dual Codes	Dept. of Math & Stats, University of Canterbury Christchurch, New Zealand
March 2003	New Media R&D	Dept. of Elec. & Comp. Eng., University of Canterbury Christchurch, New Zealand

## 12. PROFESSIONAL CONTRIBUTIONS AND ACTIVITIES

### a. Guest Lectures, Invited Talks and Other Presentations (cont'd)

May 2003	Peak-to-Average Power Ratio Reduction of OFDM Symbols	Dept. of Elec. & Comp. Eng., University of Canterbury Christchurch, New Zealand
May 2003	Peak-to-Average Power Ratio Reduction of OFDM Symbols	Dept. of Math. & Stats., Royal Melbourne Institute of Tech., Melbourne, Australia
August 2003	Peak-to-Average Power Ratio Reduction of OFDM Symbols	Dept. of Elec. & Commun. Eng. Helsinki University of Technology, Helsinki, Finland
August 2003	Peak-to-Average Power Ratio Reduction of OFDM Symbols	Department of Informatics, University of Bergen, Bergen, Norway
October 2003	Self-Reciprocal Polynomials (Palindrome Polynomials)	Department of Mathematics, Isfahan University of Technology, Isfahan, Iran
August 2003	Peak-to-Average Power Ratio Reduction of OFDM Symbols	Electrical Engineering Department, Isfahan University of Technology, Isfahan, Iran
May 2006	Self-Dual Codes Over $Z_8$ and $Z_9$	Dept. of Math. & Geospatial Sci., RMIT University, Melbourne, Australia
October 2006	Self-Dual Codes Over $Z_8$ and $Z_9$	Dept. of Mathematics, University of Louisville, Louisville, KY
March 2007	Making E911 Location Accuracy a Reality	CTIA Wireless Orlando, FL
April 2007	Modulation and Coding Techniques for Infrared Wireless Local Area Networks	University of Waterloo Dept. of Elec. & Comp. Eng. Waterloo, ON
April 2008	Coding and Information Theory	Chungbuk National University, School of Electrical and Computer Eng., Cheongju, Korea

## 12. PROFESSIONAL CONTRIBUTIONS AND ACTIVITIES

### a. Guest Lectures, Invited Talks and Other Presentations (cont'd)

April 2008	Low Complexity Joint Semiblind Detection for OFDM Systems over Time-Varying Channels	Electronics and Telecommunications Research Institute, Daejeon, Korea
October 2009	IFFT-Based Techniques for Peak Power Reduction in OFDM Communication Systems	University of Alberta Dept. of Electrical and Computer Eng., Edmonton, AB

### b. Course and Laboratory Manuals, Lecture Notes, and Other Instructional Materials

Year	Course	Title
Nil		

### 13. OTHER INFORMATION (Contributions not documented in Sections 1-12)

#### Services to the Profession

I review approximately 200 papers annually for IEEE Transaction on Computers, IEEE Transactions on Information Theory, IEEE Transactions on Communications, IEEE Journal on Selected Areas in Communications, IEEE Transactions in Wireless Communications, IEEE Communications Letters, Mathematics Abstracts, IEE Proceedings Computers, IEEE Proceedings Communications, Electronics Letters, Canadian Journal of Electrical and Computer Engineering, Personal Wireless Communications, Applied Algebra and Error Correcting Codes, Designs, Codes and Cryptography, IEEE Military Communications Conference, IEEE Pacific Rim Conference, IEEE Globecom, ISSSTA Conference, IEEE ICC, IEEE PIMRC, IEEE WCNC, etc.

Regular reviewer for NSF and NSERC grant proposals

Reviewer for Grant Proposals from Saudi Arabia, Hong Kong, Singapore, Israel

Reviewer for Mathematical Reviews and Zentralblatt Math

Reviewer, Ontario SHARCNET Program

Reviewer, Ontario Research Fund-Research Excellence Program

Member, College of Reviewers, Canada Research Chairs Program

Member, NSERC Special Research Opportunities Committee

Supervised over 50 senior undergraduate projects

2007 CCECE Student Paper Award – Supervisor

2008 CNSR Best Paper Award

2009- Member, NSERC Evaluation Group 1510, Electrical and Computer Engineering

#### Post-Doctoral Fellow Supervision

<b>Year</b>	<b>Name</b>
2000-2002	Manish Gupta
2003-2004	Zeljko Blazek
2004-2005	Wei Li
2008-2009	Abolfazi Ghassemi
2009-	Ding Wang

### **Visitor Professors**

<b>Year</b>	<b>Name</b>	<b>University</b>
2006-7	Dr. Sung-Soo Kim	Chungbuk National University, Korea
2007	Dr. Ulrich Speidel	University of Auckland, New Zealand
2007-8	Dr. Sang-Jo Park	Seowan University, Korea
2008-9	Dr. Byung-Ok Kim	Korea Institute of Maritime and Fisheries Technology, Korea