

CURRICULUM VITAE
April 2009

A. BIOGRAPHICAL INFORMATION

1. Personal

Peter M. Rosenthal	367 Palmerston Blvd.	Dept of Mathematics
June 1, 1941	Toronto, Ontario	University of Toronto
U.S., Canadian	M6G 2N5	Toronto, Ontario
	416-924-2257	416-978-3093

2. Degrees

Ph.D.	1967	University of Michigan
M.A.	1963	University of Michigan
B.S.	1962	Queen's College of City University of New York

Thesis Title: "On Lattices of Invariant Subspaces"

Thesis Supervisor: Professor P.R. Halmos

3. Employment

1976-	Professor, Mathematics, University of Toronto
1971-1976	Associate Professor, Mathematics, University of Toronto
1967-1971	Assistant Professor, Mathematics, University of Toronto
1967	Appointed to Graduate School
1971	Tenure Awarded

4. Honours

1962	Woodrow Wilson Graduate Fellowship (declined)
1962-1966	National Science Foundation Graduate Fellowship
1973-1974	Canada Council Leave Fellowship
1974	Science Research Council Senior Fellowship (Great Britain)
1986-1987	Winner of the Students Administrative Council and Assoc. of Part-time Students Teaching Award in the Sciences.
1997	BADC Award for Advocacy on behalf on Canadians of African descent
2000	Jus Memorial Human Rights Prize, U of T, Awards of Excellence

5. Professional Affiliations

Member,	Canadian Mathematical Society
Member,	American Mathematical Society

B. ACADEMIC HISTORY

6a. Research Endeavours

"Operators on Hilbert and Banach Spaces"

b. Research Awards

2007-2012	NSERC	\$12,000 per year
2001-2007	NSERC	\$16,000 per year
1998-2001	NSERC	\$13,200 per year
1997-1998	NSERC	\$12,000 per year
1993-1997	NSERC	\$20,000 per year
1990-1993	NSERC	\$20,000 per year
1987-1990	NSERC	\$23,842 per year
1984-1987	NSERC	\$19,900 per year
1981-1984	NSERC	\$17,000 per year
1978-1981	NSERC	\$12,000 per year
1975-1978	NRC	\$10,000 per year
1974-1980	NSF	\$ 5,000 per summer

C. SCHOLARLY AND PROFESSIONAL WORK

7a. Refereed Publications

1. with T. Crimmins, On the decomposition of invariant subspaces, *Bull. Amer. Math. Soc.* **73** (1967) 97–99.
2. A note on unicellular operators, *Proc. Amer. Math. Soc.* **19** (1968) 505–506.
3. Completely reducible operators, *Proc. Amer. Math. Soc.* **19** (1968) 826–830.
4. with R.G. Douglas, A necessary and sufficient condition that an operator be normal, *J. Math. Anal. and Appl.* **22** (1968) 10–11.
5. with H. Radjavi, Invariant subspaces and weakly closed algebras, *Bull. Amer. Math. Soc.* **74** (1968) 1013–1014.
6. with H. Radjavi, On invariant subspaces and reflexive algebras *Amer. J. Math.* XCI (1969) 683–692.
7. with H. Radjavi and H.C. Davis, On operator algebras and invariant subspaces, *Can. J. Math.* XXI (1969) 1178–1181.
8. with H. Radjavi and E. Nordgren, On density of transitive algebras, *Acta Sci. Math. (Szeged)* XXX (1969) 175–179.
9. with H. Radjavi, The set of irreducible operators is dense, *Proc. Amer. Math. Soc.* **21** (1969) p. 256.
10. Remarks on invariant subspace lattices, *Can. Math. Bull.* **12** (1969) 639–643.
11. Are almost commuting matrices near commuting matrices?, *Amer. Math. Monthly* **76** (1969) 925–926.
12. Examples of invariant subspace lattices, *Duke Math. J.* **37** (1970) 103–112.
13. Weakly closed maximal triangular algebras are hyperreducible, *Proc. Amer. Math. Soc.* **24** (1970) p. 220.
14. with H. Radjavi, Matrices for operators and generators of $B(H)$, *J. London Math. Soc. (2)* **2** (1970) 557–560.

15. A characterization of multiplication by the independent variable on L^p , *Studia Math. T. XXXVI* (1970) 217–221.
16. with D. Koehler, On Isometries of normed linear spaces, *Studia Math. T. XXXVI* (1970) 213–216.
17. Problems on invariant subspaces and operator algebras, Proc. of Tihany Colloquium on Hilbert space operators and operator algebras, Colloquia Mathematica Societatis Janos Bolyai 5, Tihany, Hungary, (1970) 1972, 479–487.
18. with H. Radjavi, On roots of normal operators, *J. Math. Anal. & Appl.* **34** (1971) 653–664.
19. with H. Radjavi, Hyperinvariant subspaces for spectral and n -normal operators, *Acta Sci. Math. (Szeged)* **32** (1971) 121–126.
20. with H. Radjavi, On reflexive algebras of operators, *Indiana University Math. J.* **20** (1971) 935–937.
21. with H. Radjavi, A sufficient condition that an operator algebra be self-adjoint, *Can. J. Math.* **XXIII** (1971) 588–597.
22. with K.J. Harrison and H. Radjavi, A transitive medial subspace lattice, *Proc. Amer. Math. Soc.* **28** (1971) 119–121.
23. with H. Radjavi, Graphs with isomorphic subgraphs, *J. London Math. Soc. (2)* **6** (1972) 70–72.
24. with A. Feintuch, Remarks on reductive operator algebras, *Israel J. Math.* **15** (1973) 130–136.
25. with E. Nordgren, Algebras containing unilateral shifts or finite-rank operators, *Duke Math. J.* **40** (1973) 419–424.
26. with H. Radjavi, Invariant subspaces for products of Hermitian operators, *Proc. Amer. Math. Soc.* **43** (1974) 483–484.
27. with H. Radjavi, On transitive and reductive operator algebras, *Math. Annalen* **209** (1974) 43–56.
28. with C. Davis, Solving linear operator equations, *Can. J. Math.* **XXVI** (1974) 1384–1389.
29. On commutants of reductive operator algebras, *Duke Math. J.* **41** (1974) 829–834.
30. Applications of Lomonosov's lemma to non-self-adjoint operator algebras, *Proc. Royal Irish Acad.* **74** (1974) 271–281.
31. with E. Nordgren and H. Radjavi, On operators with reducing invariant subspaces, *Amer. J. Math.* **XCVII** (1975) 559–570.
32. On reductive algebras containing compact operators, *Proc. Amer. Math. Soc.* **47** (1975) 338–340.
33. with F.F. Bonsall, Certain Jordan operator algebras and double commutant theorems, *J. Funct. Anal.* **21** (1976) 155–186.
34. with E. Nordgren and H. Radjavi, A geometric equivalent of the invariant subspace problem, *Proc. Amer. Math. Soc.* **61** (1976) 66–68.

35. with E. Nordgren and H. Radjavi, Operator algebras leaving compact operator ranges invariant, *Mich. Math. J.* **23** (1976) 375–377.
36. Some recent results on invariant subspaces, *Can. Math. Bull.* **19** (1976) 303–313.
37. with E. Nordgren and H. Radjavi, On Arveson’s characterization of hyperreducible triangular algebras, *Indiana University Math. J.* **26** (1977) 179–182.
38. with E. Nordgren, M. Radjabalipour and H. Radjavi, Algebras intertwining compact operators, *Acta Sci. Math. (Szeged)* **39** (1977) 115–119.
39. with A.R. Sourour, On operator algebras containing cyclic Boolean algebras I, *Pac. J. Math.* **70** (1977) 243–252.
40. with A.R. Sourour, On operator algebras containing cyclic Boolean algebras II, *J. London Math. Soc. (2)* **16** (1977) 501–506.
41. with E. Nordgren, M. Radjabalipour and H. Radjavi, On invariant operator ranges, *Trans. Amer. Math. Soc.* **251** (1979) 389–398.
42. with C.K. Fong, E. Nordgren, M. Radjabalipour and H. Radjavi, Extensions of Lomonosov’s invariant subspace theorem, *Acta Sci. Math. (Szeged)* **41** (1979) 55–62.
43. with W. Longstaff, On two questions of Halmos concerning sub-space lattices, *Proc. Amer. Math. Soc.* **75** (1979) 85–86.
44. with D. Hadwin, E. Nordgren and H. Radjavi, Most similarity orbits are dense, *Proc. Amer. Math. Soc.* **76** (1979) 250–252.
45. with D. Hadwin, E. Nordgren and H. Radjavi, An operator not satisfying Lomonosov’s hypothesis, *Jour. of Funct. Anal.* **38** (1980) 410–415.
46. with I. Halperin, Burnside’s Theorem on algebras of matrices, *Amer. Math. Monthly* **87** (1980) p. 810.
47. with C. Laurie, E. Nordgren and H. Radjavi, On triangularization of algebras of operators, *J. r. u. angew. Math., Band* **327** (1981) 143–155.
48. On the equations $X = KXS$ and $AX = XK$, Proc. of Banach Centre Symposium on Spectral Theory, Warsaw, (1982) 389–391.
49. with H. Radjavi, The invariant subspace problem, *Math. Intelligencer* **4** (1982) 33–37.
50. with K. Harrison and W. Longstaff, Some tractable non-self-adjoint operator algebras, *J. Lond. Math. Soc. (2)* **26** (1982) 325–330.
51. with D. Hadwin and W. Longstaff, Small transitive lattices, *Proc. Amer. Math. Soc.* **87** (1983) 121–124.
52. with E. Nordgren and H. Radjavi, Triangularizing semigroups of compact operators, *Indiana Univ. Math. J.* **33** (1984) 271–275.
53. with E. Nordgren and F. Wintrobe, Composition operators and the invariant subspace problem, *Proc. Royal Sci. Canada VI* (1984) 279–283.
54. with M.-D. Choi, D. Hadwin, E. Nordgren and H. Radjavi, On positive linear maps preserving invertibility, *Journal Functional Analysis* **59** (1984) 462–469.

55. with I. Halperin and C. Kitai, On orbits of linear operators, *J. Lond. Math. Soc.* (2) **31** (1985) 561–565.
56. with H. Radjavi, On fixed points of semigroups of linear contractions, *Proc. Amer. Math. Soc.* **93** (1985) 640–642.
57. R.B. Honor (acronym for seven authors), Density and transitivity results on ℓ^1 and ℓ^∞ , *J. Lond. Math. Soc.* (2) **32** (1985) 521–527.
58. with D. Hadwin, E. Nordgren, H. Radjavi, Orbit reflexive operators, *J. Lond. Math. Soc.* (2) **34** (1986) 111–119.
59. with W. Longstaff, On operator algebras and operator ranges, *Integral Equations and Oper. Theory* **9** (1986) 820–830.
60. with D. Hadwin, E. Nordgren, M. Radjabalipour, H. Radjavi, A nil algebra of bounded operators on Hilbert space with semisimple norm closure, *Integral Equats. and Oper. Theory* **9** (1986) 734–743.
61. The remarkable theorem of Levy and Steinitz, *Amer. Math. Monthly* **94** (1987) 342–351.
62. with E. Nordgren and F. Wintrobe, Invertible composition operators on H^P , *J. Functional Analysis* **73** (1987) 324–344.
63. with C.K. Fong and H. Radjavi, Norms for matrices and operators, *J. Operator Theory* **18** (1987) 99–113.
64. with E. Nordgren and H. Radjavi, Weak resolvents of linear operators, *Indiana Univ. Math. J.* **36** (1987) 913–934.
65. with M.D. Choi, C. Laurie, H. Radjavi, On the congruence numerical range and related functions of matrices, *Lin. and Mult. Alg.* **22** (1987) 1–5.
66. with C. Foias and S.C. Ong, An interpolation theorem and operator ranges, *Int. Equats. Oper. Thy.* **10** (1987) 802–811.
67. with E. Nordgren, M. Radjabalipour, H. Radjavi, Quadratic operators and invariant subspaces, *Studia Math. T.* LXXXVIII (1988) 263–278.
68. with C.K. Fong, E. Nordgren, H. Radjavi, On weak resolvents of linear operators, II, *Indiana Univ. Math. J.* **39** (1990) 69–83.
69. with C.K. Fong, E. Nordgren, H. Radjavi, A similarity invariant, in *Operator Theory, Operator Algebras and Applications*, Proc. Sym. Pure Math. 51, Part II, A.M.S., Providence, 1990, pp. 99–101.
70. with M.-D. Choi and H. Radjavi, On complemented matrix algebras, *Int. Equats. Oper. Theory* **13** (1990) 165–174.
71. Equivalentents of the invariant subspace problem, in *Paul Halmos: Celebrating 50 Years of Mathematics*, Springer-Verlag, New York, 1991, pp. 179–188.
72. with D. Hadwin, E. Nordgren, M. Radjabalipour, and H. Radjavi, On simultaneous triangularization of collections of operators, *Houston J. Math.* **17** (1991) 581–602.

73. with M.-D. Choi and J. Rosenthal, Linear-Algebraic Results Associated with Anti-ferromagnetic Heisenberg Chains, *SIAM J. Matrix Anal. Appl.* **14** (1993) 830–852.
74. with M.-D. Choi, E. Nordgren, H. Radjavi, Y. Zhong, Triangularizing semigroups of quasinilpotent operators with non-negative entries, *Indiana Univ. Math. J.* **42** (1993) 15–25.
75. with E. Nordgren, Boundary values of Berezin symbols, *Int. Oper. Thy. Adv. Appl.* **73** (1994), 362–368.
76. with M.-D. Choi, A survey of Chandler Davis, *J. Lin. Alg. Appl.*, **208/209** (1994), 3–18.
77. with six co-authors (as “Hadwin Lunch Bunch”), Local multiplications on algebras spanned by idempotents, *Lin. Mult. Alg.* **37** (1994), 259–263.
78. with A. Jafarian, H. Radjavi, A. Sourour, Simultaneous triangularizability, near commutativity and Rota’s theorem, *Trans. Amer. Math. Soc.*, **347** (1995), 2191–2199.
79. with A. Soltysiak, Formulas for the joint spectral radius of non-commuting Banach algebra elements, *Proc. Amer. Math. Soc.*, **123** (1995), 2705–2708.
80. with C. Fong, G. Lumer, E. Nordgren, H. Radjavi, Local polynomials are polynomials, *Studia Math.* **115** (2) (1995), 105–107.
81. with M.-D. Choi and J. Hou, Completion of operator partial matrices to square-zero contractions, *Lin. Alg. Appl.* **256** (1997), 1–30.
82. with R. Bhatia, How and why to solve the operator equation $AX - XB = Y$, *Bull. Lond. Math. Soc.*, **29** (1997), 1–21.
83. with H. Radjavi, From local to global triangularization, *J. Functional Anal.* **147** (1997), 443–456.
84. with Cigler, Drnousek, Kokol-Bukousek, Laffey, Omladic, Radjavi, Invariant subspaces for semigroups of algebraic operators, *J. Functional Anal.* **160** (1998), 452–465.
85. with J. Holbrook, E. Nordgren, H. Radjavi, On the operator equation $AX = XAX$, *Lin. Alg. Appl.* **295** (1999), 113–116.
86. with J. Hou and H. Radjavi, Idempotent completions of operator partial matrices, *Acta. Sci. Math.* (English Ser.) **15** (1999), 333–346.
87. with H. Radjavi and V. Shulman, Operator semigroups with quasinilpotent commutators, *Proc. Amer. Math. Soc.* **128** (2000), 2413–2420.
88. with W. Longstaff, Generators of matrix incidence algebras, *Australas J. Combin. Thy.* **22** (2000), 117–121.
89. with M. Omladic, H. Radjavi, and A. Sourour, Inequalities for products of spectral radii, *Proc. Amer. Math. Soc.* **129** (2001), 2239–2243.
90. with H. Radjavi, On commutators of idempotents, *Lin. and Mult. Alg.* **50** (2002), 121–124.

91. with R. Drynovsek and H. Radjavi, A characterization of commutators of idempotents, *Lin. Alg. Appl.* **347** (2002), 91–99.
92. with J. Lu, N. Murray, H. Radjavi and E. Rosenthal, Inference for annotated logics over distributive lattices, ISMIS, Lecture Notes for Artificial Intelligence 2002, 285–293.
93. with V. Lomonosov, The simplest proof of Burnside’s Theorem on matrix algebras, *Lin. Alg. Appl.* **383** (2004), 45–47.
94. with M. Radjabalivour and B. Yahaghi, Burnside’s Theorem for matrix algebras over division rings, *Lin. Alg. Appl.* **383** (2004), 29–44.
95. with H. Radjavi, On submultiplicativity of spectral radius and transitivity of semigroups, *Proc. Amer. Math. Soc.* **135** (2007), 163–168.
96. with D. Hadwin and E. Nordgren, On the operator equation $AXB + CYD = Z$, *Oper. Matrices* 1 (2007), 199–207.
97. with H. Radjavi, Limitations on the size of semigroups of matrices, *Semigroup Forum* **76** (2008), 25–31.

b. Books

1. with H. Radjavi, *Invariant Subspaces*, Springer-Verlag, Berlin-Heidelberg-New York, (1973), 219 pp. Second edition, July 2003, Dover Publications, 248 pp.
2. Editor, Chapter 5: General Operator Theory, *Linear and Complex Analysis Problem Book 3*, Lecture Notes in Math. 1573, Springer-Verlag, 1994.
3. with H. Radjavi, *Simultaneous Triangularization*, Springer-Verlag, Berlin-Heidelberg-New York, (2000), 318 pp.
4. with R. Martinez-Avendano, *An Introduction to Operators on the Hardy-Hilbert Space*, Graduate texts in Math 237, Springer-Verlag, New York, (2007), 220 pp.

c. Reviews

1. Numerous reviews of papers in *Mathematical Reviews*.
2. Review of Edwards and Penney, *Calculus and Analytic Geometry*, *Amer. Math. Monthly* **90** (1983), 576–579.
3. Review of two books on composition operators, *Bull. Amer. Math. Soc.* **32** (1995), 150–153.
4. Featured review of “Quasinilpotent operators and the invariant subspace problem”, *Math. Reviews*: 98m47004.
5. Featured review of “Volterra semigroups have invariant subspaces”, *Math. Reviews*: 2000d47017.

9. Work-in-progress

1. Semigroup Toeplitz operators.
2. Triangular operator algebras and simultaneous triangularization.
3. Composition operators on Newton Spaces

4. with A. Atzmon, D. Kleper and A. Mahridi, Multipliers and orbit reflexivity of composition operators on weighted Hardy-Hilbert spaces, submitted for publication.
5. with H. Radjavi, Paul Halmos and Invariant subspaces, to appear in "Paul Halmos: In Memoriam".

11. Invited Lectures

Before 1980	Western Ontario, Queens Virginia, Indiana, Toledo, Miami (Ohio), Bucknell, Illinois, Buffalo, Stony Brook, New Paltz, Edinburgh, London, Bucharest, Szeged, Zagreb, Warsaw, Melbourne, Dublin, Perth, Sydney, Adelaide, Newcastle (Australia), Israel, Japan. Twice invited to speak at special session of American Mathematical Society. Twice invited to speak at annual meeting of Canadian Mathematical Society. Invited to speak at international conferences in Indiana, Dublin, Hungary, Ghana, Romania, Poland.
1979-1980	Colloquia at Bucknell University and University of Western Ontario. Invited address at C.M.S. annual meeting. Invited lecture at West African symposium on Functional analysis, Ghana.
1980-1981	Colloquia at Victoria, Ottawa, New Hampshire, Western Australia, Buffalo.
1981-1982	Invited lecture at A.M.S. special session on operator theory; Seminar talk at University of Waterloo. Colloquium and Seminar talk at University of New Hampshire.
1982-1983	Invited lecturer at semester on spectral theory, Warsaw (2 lectures). Colloquium talks at Indiana University and University of Ottawa; seminar talk University of Michigan.
1983	"Positive maps preserving invertibility", Colloquium Lecture, Indiana University.
1983 (April)	"Positive maps preserving invertibility", Seminar talk University of Michigan.
1984	Colloquium and seminar at University of Western Australia: "Composition Operators" and "Fixed points of semigroups". Seminar at Murdoch University: "Orbits of linear operators".
1985 (April)	Seminar at S.U.N.Y. Buffalo: "Composition operators and invariant subspaces".
1985 (Nov.)	Seminar at Dalhousie University: "Weak resolvents of linear operators".
1985 (Dec.)	Joint Carleton-Ottawa colloquium: "Equivalent of the Invariant Subspace Problem".
1986 (Mar.)	NSF sponsored conference at Indiana University:

- “A new kind of cyclicity”.
- 1986 (Mar.) Operator Day at Ottawa University: “Weak resolvents of linear operators”.
- 1986 (Spring) Colloquium at Univ. of New Hampshire: “The remarkable Theorem of Levy and Steinitz.”
- 1987 (March) Seminar at Arizona State University, “Weak resolvents of linear operators”.
- 1989 (Fall) Colloquium at York University: “A Similarity Invariant”.
- 1989 (Fall) Seminar at SUNY Buffalo: “On weak resolvents”.
- 1992 (Spring) Conference in Beersheva, Israel:
 “Berezin symbols and compactness of operators”.
 Colloquium lecture, University of Manitoba:
 “A numerical function that determines operators”.
 Colloquium lecture, University of New Hampshire:
 Berezin symbols of linear operators”.
- 1994 (Fall) Colloquium Lecture, University of New Hampshire
 Seminar Lecture, Dalhousie University
- 1995 (Spring) Colloquia at Adam Mickiewicz University (Poznan, Poland);
 Institute of Mathematics (Warsaw);
 Universities of the Witwatersrand, Patchefstrom,
 Capetown, Pretoria (all in South Africa);
 Seminar at University of Pretoria.
- 1995 (Fall) Colloquium at Dalhousie University.
- 1996 (Spring) Invited speaker at special session on non-self-adjoint operator algebras, American Mathematical Society annual meeting in Orlando, Florida
 Invited keynote speaker at International Conference on Abstract Analysis, South Africa
 Invited participant, Linear Algebra Workshop, Bled
- 1996-1997 Colloquium at University of Wisconsin
 Seminar at University of Wisconsin
- 1997-1998 Colloquium at Univ. of Guelph
- March 1998 Invited speaker at conference on hypercyclic operators, Kent State University
- June 1998 Invited speaker at conference at Dalhousie University
 Invited speaker at Special Session on Operator Theory at Summer meeting of the Canadian Math. Soc.
- 1999 Invited speaker at Banach Algebras 1999; lecture at Canadian Operator Algebra Conference, P.E.I.
- 2000 Invited speaker at International Conference on Abstract Analysis, South Africa
 Colloquium talk at University of Havana
 Colloquium talk at University of Capetown
 Colloquium talk at University of Western Ontario

- Invited speaker at special session of American Mathematical Society,
Toronto, September 2000
- 2001 Invited speaker, Great Plains Operator Theory Seminar, June, 2001
- 2002 Invited speaker, Canadian Operator Symposium, May 12-17, 2002,
“Orbit reflexive semigroups”.
- Invited participant, Workshop on Linear Algebra, Slovenia, June 2-15, 2002,
two lectures
- (1) “Triangular operator algebras and simultaneous triangularization”
(2) “Orbit reflexive semigroups”
- 2003 Invited speaker, Conference in honour of Don Sarason, Berkeley,
Jan. 25-26, 2003, “Orbit reflexive operators”
- Invited refereed oral conference presentation by a co-author: (with Lu, J.J.;
Murray, N.V.; Radjavi, H.; Rosenthal, E.) Inference for annotated logics
over distributive lattices, presented to 13th International Symposium
on Methodologies for Intelligent Systems, Lyon, France, June 27-29, 2002.
Key note invited address (Blundon Lecture) APICS Mathematics,
Statistics and Computer Science Conference, October 2003, “The strange case
of Mathematics V. Law”
- Invited speaker, October 2003, AARMS research session on linear
algebra, “The simplest proof of Burnside’s Theorem on matrix algebras”
- 2005 Invited lecture “Equations such as $AX + YB = Z$ in Matrices or Operators”,
special session on Matrix Analysis, CMS annual meeting December 2005.
Colloquium Lecture “Linear Equations in Linear Operators”, Universidad de
Hidalgo Pachuca, Mexico, December 2005.
- 2008 Invited speaker at conference in honour of Ronald Douglas, China, June 2008.
Invited participant in Linear Algebra workshop, Slovenia, June 2008.
- 2009 Invited main speaker at 3rd International workshop on Elementary Operators,
Belfast, April 2009.

D. LIST OF COURSES TAUGHT

12a. Undergraduate

2004-2008	MAT 246Y	Concepts in Abstract Math. (Coordinator)
2003-2004	MAT 246Y	Concepts in Abstract Math. (Coordinator)
2003-2004	MAT 137Y	Calculus I (Coordinator)
2002-2003	MAT 135Y	Calculus I (Coordinator)
2001-2002	MAT 135Y	Calculus I (Coordinator)
	MAT 246Y	Concepts in Abstract Math.
2000-2001	MAT 135Y	Calculus I (Coordinator)
	MAT 246Y	Concepts in Abstract Math.
1999-2000	MAT 246Y	Concepts in Abstract Math.
1998-1999	MAT 246Y	Concepts in Abstract Math.
1997-1998	MAT 137Y	Calculus
	MAT 246Y	Concepts in Abstract Math.
1996-1997	MAT 137Y	Calculus

1995-1996	MAT 137Y	Calculus
	MAT 467H	Seminar in Mathematics
1993-1994	MAT 186F	Calculus I
	MAT 187S	Calculus II
1992-1993	MAT 186F	Calculus I
	MAT 187S	Calculus II
1988-1989	MAT 139Y	Calculus
1986-1987	MAT 350	Real Analysis
	MAT 135Y	Calculus for Scientists
1985-1986	MAT 350	Real Analysis
1985-1986	MAT 244S	Ordinary Differential Equations
1983-1984	MAT 150Y	Analysis I
1983-1984	MAT 459	Functional Analysis
	MAT 187H	Engineering
	MAT 139Y	Calculus
1982-1983	MAT 150Y	Analysis I
	MAT 459F	Functional Analysis
1981-1982	MAT 150Y	Analysis I
	MAT 280F	Engineering
	MAT 289S	Engineering
1980-1981	On Leave	
1979-1980	MAT 130Y	Calculus I
	MAT 189S	Linear Analysis (Engineering)
	MAT 459F	Functional Analysis
1978-1979	MAT 188F	Linear Algebra (Engineering)
	MAT 189S	Linear Analysis (Engineering)
	MAT 459F	Functional Analysis

b. Graduate

2000-2001	MAT 1015F	Semigroups of Operators
1996-1997	MAT 1015F	Linear Operators on H^2
1995-1996	MAT 1015F	Topics in Operator Theory
1992-1993	MAT 1011F	Introduction to Linear Operators
	MAT 1015S	Linear Operators on H^2
1985-1986	MAT 1015F	Topics in Operator Theory
1983-1984	MAT 1010	Functional Analysis
1982-1983	MAT 1010F	Functional Analysis
	MAT 1015S	Topics in Operator Theory

c. Ph.D. Theses Supervised

1972	T. Owusu-Ansah	“Hermitian operators of meromorphic type on Banach spaces”
1972	W.E. Longstaff	“Some results on nest algebras”
1972	A.A. Feintuch	“On operator algebras and invariant subspaces”
1973	A.A. Jafarian	“Spectral decomposition of operators on Banach Spaces”

1976	C.K. Fong	“Applications of direct integrals to operator theory”
1979	B. Chan	“Similarity and unicellularity of triangular operators”
1982	C. Kitai	“Invariant closed sets for linear operators”
1988	N. Zorboska	“Composition operators on weighted Hardy spaces”.
1989	G. MacDonald	“Invariant subspaces for weighted translation operators”.
1991	L. Livshits	“Schur multiplication of matrices with operator entries”.
1997	B. Cloud	“Commutants of Composition operators”
1999	A. Mahvidi	“Invariant Subspaces of Composition operators”
2000	R. Martinez	“Hankel Operators and Generalizations”
2008	D. Kleper	“Invariant subspaces of composition operators on weighted Hardy-Hilbert spaces”

d. Other

1985	I. Doust	MA thesis — “Spectra of Composition operators”
------	----------	------------------------------------------------

13. Administrative Positions

Member,	Colloquium Committee, Departmental Council, Graduate Committee, Promotion to Professor Committee, Merit Raise Committee, various tenure Committees Departmental Councillor
1981-1982	Chairman of Undergraduate Committee
1982-1983	Mathematics programme advisor Member, Promotion to Professor Committee Chairman, Undergraduate Curriculum Committee
1983-1984	Chairman, Undergraduate Committee Math Department programme advisor Promotional and Senior Appt Committee UTFA Council Member
1985-1986	Math programme advisor UTFA Council Member Promotions and Senior Appointments Committee Merit /PTR Committee
1986-1987	Math Programme advisor UTFA Council Member Promotions Committee
1989-1995	Member, Academic Board
1991-1992	Promotions Committee
1992-1993	Promotions Committee
1993-1994	Merit Committee
1994-1995	Promotions Committee, Merit Committee
1997-1998	Graduate Appeals Committee
1998-1999	Graduate Appeals Committee Undergraduate Committee
1999-2000	Graduate Appeals Committee Merit Committee
2000-2006	Chair, Graduate Appeals Committee