

Curriculum Vitae

April 4, 2015

NAME

ANGELO B. MINGARELLI

ADDRESS

School of Mathematics and Statistics,
Carleton University,
Ottawa, Ontario, K1S 5B6, Canada

COORDINATES

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RANK

Full Professor (since 1989); Tenured (since 1984).

ADMINISTRATIVE POSITIONS

Past President of CUASA (Carleton University Academic Staff Association),
2014-2015
President of CUASA (Carleton University Academic Staff Association), 2012-
2013, 2013-2014
President Elect of CUASA (Carleton University Academic Staff Association),
2012-2013
Academic Member, Board of Governors, Carleton University, since 2010
Past President of CUASA (Carleton University Academic Staff Association),
2010-2011
President of CUASA (Carleton University Academic Staff Association), 2009-
2010
President Elect of CUASA (Carleton University Academic Staff Association),
2008-2009
Associate (Vice-) Dean of Graduate Studies and Research (2002-2005)
Director of the School of Mathematics and Statistics (2000-2001),

DEGREES

Ph.D. University of Toronto, 1979
M.Sc. University of Toronto, 1975
B.Sc. (Summa cum Laude), Loyola College, Montreal, 1974

CAREER HISTORY

2008 Short term visitor, Institute for Advanced Studies, Princeton, and Princeton University, Princeton, N.J., 02/04-04/12.

2008 Professeur Invité, Université de Perpignan, France, 04/28/08-05/26/08

2006-2008 Visiting Professor, Universidad de Las Palmas de Gran Canaria, Spain

2005 Visiting Academic, 04/1-04/30, The University of Sydney, Australia.

2002 - 2005 Assoc. Dean, Fac. of Graduate Studies and Research, Carleton Univ.

2000 - 2001 Director, School of Mathematics and Statistics, Carleton University.

1992 CNR Visiting Professor, Politecnico di Torino, Italy (01/05-30/06)

Since 1990 Full Professor (tenured), Carleton University.

1989-1990 Full Professor, University of Ottawa, Ottawa, Ontario, Canada

1985-1989 Associate Professor and NSERC University Research Fellow, University of Ottawa.

1981-1985 Assistant Professor and NSERC University Research Fellow, University of Ottawa.

1979-1981 Assistant Professor, University of Ottawa.

1978-1979 Instructor, The Pennsylvania State University, University Park, PA.

HONORS

Fellow of the Royal Astronomical Society, 2012

Super Professor, Faculty Row, 2012

Nominated for a Capital Educator's Award, Ottawa, 2012

Nominated for a Graduate Mentoring Award for Faculty, Carleton University, 2011

Study Sphere Award of Excellence for online teaching, 2006

Nominated for an OCUFA Teaching Award, Carleton University, 2006

Delivered the 22nd APICS Blundon Lecture, Mount Allison University, 2002

StudyWeb Award for Excellence in Online Education, 1999

Teaching Achievement Award for Excellence in Teaching, Carleton University, 1998.

Award for Excellence in Teaching, Faculty of Science, Carleton University, 1996
National Examiner for the Professional Engineers of Ontario (PEO), 1996-2001
Award for Excellence in Teaching, Faculty of Science, Carleton University, 1992
Distinguished Lecturer, Clemson University, SC., 1990
N.S.E.R.C. Canada University Research Fellow, University of Ottawa, 1981-1989
Long Service Award, National Commission of the Boy Scouts of Canada, 1988
Teacher of the Year nominee for 1987 (one of three university-wide nominees), University of Ottawa
N.R.C. 1967 Science (Centennial) Scholar, 1974-1978, University of Toronto
B.Sc. awarded with the mention *Summa cum Laude*, Loyola College, 1974
Loyola Scholar, 1972-1974 (Recipient of yearly full-tuition scholarships)
Dean of Science Honor List, Loyola College, 1971-1974

BOOKS AND MONOGRAPHS AUTHORED

The ABC's of Calculus (Complete Edition), The Nolan Company, Ottawa (2010), 735 p., (also appeared as an e-book) ISBN 978-0-9698889-5-6

Multiparameter Eigenvalue Problems, by F.V. Atkinson and A.B. Mingarelli, Chapman and Hall Publishers, New York, (2010), 283 pp.

Calculus, (Combined Preliminary Edition), The Nolan Company, Ottawa (1999-2000-2001), 704 p. ISBN 0-9698889-3-7

Solutions Manual to Accompany 'Calculus', The Nolan Company, Ottawa (1999), 124 p. ISBN 0-9698889-4-5

The ABC's of Calculus: Module on Inverse Functions, The Nolan Company, Ottawa (1994), 78 p.

Non-oscillation domains of differential equations with two parameters, (jointly with S.G. Halvorsen), LECTURE NOTES IN MATHEMATICS, 1338, Springer-Verlag, New York, 1988, xi, 109 p.

Oscillation, Bifurcation and Chaos, co-edited with F.V. Atkinson and W.F. Langford. CANADIAN MATHEMATICAL SOCIETY, VOL. 8, American Mathematical Society, Providence, 1987, xv, 740 p.

Volterra-Stieltjes Integral Equations and Generalized Ordinary Differential Expressions. LECTURE NOTES IN MATHEMATICS, 989, Springer-Verlag, New York, 1983, xiv, 318 p. (Solo work)

CHAPTERS IN BOOKS

"A Review of Calculus" in Handbook of Industrial Automation, R.L. Shell and

E.L. Hall (eds), Marcel Dekker, New York, (2000), 65-86.

KEYNOTE SPEAKER (PLENARY TALKS) AT CONFERENCES

International Conference on Systems Theory: Modeling, Analysis and Control
Fes, Morocco, May, 2009

Charles François Sturm, Colloquium and Workshop to honor the 200th. anniversary of the birth of Sturm, University of Geneva, Switzerland, Sept. 2003.

APICS 22nd Blundon Lecturer, Mount Allison University, October 2002

International Conference on Differential Equations and Dynamical Systems,
Memorial University, Newfoundland, Canada, July 2002

International Conference on Complex Systems, University of Otago, Dunedin,
New Zealand, November, 2000.

International Workshop on the Theory and Applications of Operator Theory
(IWOTA), University of Regensburg, Regensburg, Germany, August 1995

Heun Centennial Conference, Max Planck Institut für Metallforschung, Rottach-
Egern, Germany, September 1989

Geoffrey J. Butler Memorial Conference on Differential Equations and Population
Biology, University of Alberta, Edmonton, Alberta, Canada, June, 1988

Differential Equations in the Complex Domain, Mathematics Institute, Ober-
wolfach, Germany, March, 1987

International Workshop on Applied Differential Equations, Tsinghua University,
Beijing, The People's Republic of China, June, 1985.

COLLOQUIUM SPEAKER

University of Sydney, Sydney, Australia, April 2005

Mount Allison University, Sackville, NB., Blundon Lecturer, Oct. 2002

Trent University, Peterborough, 1999

Queen's University, Kingston, 1999

Memorial University of Newfoundland, St. Johns, Newfoundland, 1997

Northern Illinois University, De Kalb, Illinois, 1995

University of Western Ontario, London, Ontario, 1994

Technical University of Russe, Bulgaria, 1993

Clemson University, Clemson, SC., U.S.A., 1990

York University, Canada, 1990

Old Dominion University, Norfolk, VA., 1989

Mount Allison University, Canada, 1988

University of Alberta, Canada, 1986 and 1990
Nanjing Institute of Technology, People's Republic of China, 1985
Chinese Academy of Sciences, Beijing, People's Republic of China , 1985
Zhejiang University, People's Republic of China, 1985
University of Trondheim, Norway, 1984
University of Ottawa, Canada, 1980 and 1983

INVITED SEMINAR SPEAKER

University of Perpignan, France, May, 2008
University of Cádiz, Spain, May, 2008
University of Las Palmas in Gran Canaria, Spain, 2006
University of Sydney, Sydney, Australia, 2005 (2 talks)
University of Las Palmas in Gran Canaria, Spain, 2004 (5 talks)
Technical University of Russe, Bulgaria, 1993
Dublin City University, Dublin, Ireland, 1992
Turin Polytechnic Institute, Turin, Italy, 1992, (2 talks)
University of Udine, Italy, 1992
University of Florence, Italy, 1992
University of Alberta, 1990
Clemson University, SC., 1990, (2 talks)
Virginia Polytechnic Institute and State University, 1989
Old Dominion University, 1989, (2 talks)
McGill University, 1989, (2 talks)
Carleton University, 1988, (3 talks)
University of New Brunswick, 1986
University of Toronto, 1984
University of Tennessee, 1984
University of Alberta, 1984, (7 talks)
Argonne National Laboratory, Il., 1984, (5 talks)
University of Calgary, 1984
York University, 1984, 1988
University of Alabama in Tuscaloosa, 1980, 1986
McMaster University, 1980
Dalhousie University, 1980
University of Ottawa, 1979
Pennsylvania State University, 1978

OTHER INVITED TALKS

Science Cafe, Ottawa, October, 2013
Carleton University Undergraduate Mathematics Students Society Colloquium
talk, 2012
On Italian Culture, University of Ottawa, October, 2012

Excursions into Mathematics, to a Japanese delegation of High-School students, Carleton University, March, 2012.

Leonardo Da Vinci and his Mathematics, Spring Conference, Carleton University, April, 2011

Carleton University Undergraduate Mathematics Students Society Colloquium talk, (2010, 2011)

Math Connections, - Math, Art, and Life: A morning of unusual mathematical connections, Carleton University, Ottawa, May, 2010

Second Annual $[0, \infty)$ Mathematics Day, Carleton University, Nov. 2009

Riemann Day, Carleton University, November, 2009

Carleton University Science Café, April 22, 2009

Carleton University Undergraduate Mathematics Students Society Colloquium talk, Nov. 2008

First Annual $[0, \infty)$ Mathematics Day, Carleton University, Nov. 2008

Carleton University (Undergraduate) Mathematics Society's *Pi Day*, The Golden Mean in Early Italian Renaissance Art, (2005)

Carleton University (Undergraduate) Mathematics Society, On the impossibility of Angle Trisection, Carleton University, March, 2000

Carleton University Showcase Speaker, 24 March 2000, Teaching and Learning Resource Centre, Carleton University

National Museum of Science and Technology Showcase, March, 2000, Ottawa

Carleton University (Undergraduate) Engineering Society, Carleton University, 1999

Shad Valley Program, Carleton University, 1991, 1992, 1993

Science and Engineering Workshop for High-School Students, University of Ottawa, 1983

Seminar for Secondary School Students in the 1983 Junior Mathematics Contest, Carleton University, 1983

Invited Address, University Seminar for High-School Mathematics Students, Sponsored by Carleton University and the University of Ottawa, 1983.

INVITED SPECIAL SESSION TALKS AT CONFERENCES

International Workshop on Functional Analysis, University of the West, Timisoara, Romania, October, 2012 (2 talks).

ACRI 2008, Yokohama National University, Yokohama, Japan, Sept. 2008 (talk delivered by co-author)

IWOTA 2008, The College of William and Mary, Virginia, USA, July 2008

ACRI 2006, University of Perpignan VD, France, Sept. 2006

ICCS 2006, University of Reading, UK, on Fuzzy Rule 182

2005 World Congress in Applied Computing (WCAC'05), 2005 International Conference on Scientific Computing, Las Vegas, USA, June 20-23

ICCS 2005, International Conference on Computational Science, Emory University, Atlanta, Georgia, USA, May 22-25, 2005

WSEAS International Conference on Circuits and Systems, Tenerife, Spain, Dec. 2004

WSEAS International Conference on Systems, Rhodes Island, Greece, Nov. 2003
 Canadian Mathematical Society Winter Meeting, Ottawa, Canada, December 2002
 Canadian Mathematical Society Winter Meeting, Toronto, Canada, December 2001
 Third World Congress on Nonlinear Analysis, Catania, Sicily, July, 2000
 Complex Systems 98, University of New South Wales, Sydney, Australia, 1998
 International Conference on Applied Analysis, Karlovassi, Island of Samos, Greece, 1996
 International Workshop on the Theory and Applications of Operator Theory (IWOTA), University of Regensburg, Regensburg, Germany, 1995
 Special Functions and Related Topics in Analysis (in honor of Lee Lorch), York University, Toronto, 1995
 International Conference on Dynamic systems and Applications, Morehouse College, Atlanta, Georgia, 1995
 International Conference in honor of Lee Lorch, York University, Toronto, 1995
 International Conference on Applications of Operator Theory, Institute of Industrial Mathematical Sciences, The University of Manitoba, 1994
 International Conference in honour of W.N. Everitt, University of Alabama, Tuscaloosa, 1994
 Operator Theory and Boundary Eigenvalue Problems, Technical University of Vienna, 1993
 International Conference on Dynamic Systems, Morehouse College, Atlanta, GA, U.S.A., 1993
 International Conference on Nonlinear Waves, Carleton University, 1991
 Annual Meeting of the American Mathematical Society, Louisville, KY., 1990
 Winter Meeting of the Canadian Mathematical Society, Concordia University, 1989
 Annual Meeting of the Canadian Mathematical Society, University of Windsor, 1989
 82nd. Ontario Mathematics Meeting, University of Waterloo, 1988
 International Conference on Theory and Applications of Differential Equations, Ohio, 1988
 International Conference on Spectral Theory of Differential Operators, Alabama, 1986
 823rd Regional Meeting of the American Mathematical Society, Missouri, 1985
 International Conference on Theory and Applications of Differential Equations, Texas, 1985
 Workshop in honor of Yves Meyer, McMaster University, 1985
 International Conference on Qualitative Theory of Differential Equations, Alberta, 1984
 International Conference on Differential Operators, Alabama, 1983
 Symposium on Differential Operators, Dundee, Scotland, 1982
 7th. International Conference on Differential Equations, Dundee, Scotland, 1982
 International Conference in Spectral Theory of Differential Operators, Alabama,

1981

Summer Seminar in Differential Equations, University of Toronto, 1979

OTHER EVIDENCE OF IMPACT AND CONTRIBUTIONS

External Examiner for many Doctoral theses (in Canada, the USA, and Europe). Associate Editor of 6 journals at different times, I have a mathematical identity named after me, “The Mingarelli Identity” (coined by Philip Hartman, 1981) an identity that extended the Sturm comparison theorem to three or more second order linear equations. I proved a 20 year-old conjecture called Jorgens’ Conjecture (with Atkinson, 1987) on the asymptotic behaviour of eigenvalues of general Sturm-Liouville problems. I published two papers in *Crelle’s Journal*, the world’s oldest mathematical journal (whose contributors included Gauss, Abel, Jacobi, Dirichlet, Möbius, etc.). I published two monographs in Springer Verlag’s *Lecture Notes in Mathematics* series. I’ve been holding an NSERC grant for 32 years since my first application in 1981.

COMPLETE SET OF PUBLICATIONS

1. Problem 192, (with Mario D’Angelo)
Canad. Math. Bulletin 14 (4) (1971), 598
2. Solution to Problem 216
Canad. Math. Bulletin 17 (1974), 434
3. Some extensions of the Sturm-Picone theorem
C.R. Math. Rep. Acad. Sci. Canada, 1 (1979), 223-226
4. An oscillation criterion for second order self-adjoint differential systems
C.R. Math. Rep. Acad. Sci. Canada, 2 (1980), 287-290
5. On a conjecture for oscillation of second order ordinary differential systems
Proc. Amer. Math. Soc., 82 (1981), 593-598
6. On a Stieltjes version of Gronwall’s inequality
Proc. Amer. Math. Soc., 82 (1981), 249-252
7. A limit-point criterion for a three-term recurrence relation
C.R. Math. Rep. Acad. Sci. Canada, 3 (1981), 171-175
8. Solution to Problem 158
Two-Year College Math. Journal 12 (1981), 215
9. Sturm theory in n-space
in Spectral Theory of Differential Operators, North-Holland, New York, 1981:
337-341

10. Jacobi type polynomials under an indefinite inner product (with A.M. Krall)
Proc. Royal Soc. Edinburgh, 90A (1981), 147-153
11. Indefinite Sturm-Liouville problems
in Ordinary and Partial Differential Equations, Lecture Notes in Mathematics
964, Springer-Verlag, New York, 1982: 519-528
12. Laguerre type polynomials under an indefinite inner product (with A.M.
Krall)
Acta Math. Acad. Sci. Hungaricae, 40 (1982), 237-239
13. On the existence of non-simple real eigenvalues for general Sturm-Liouville
problems
Proc. Amer. Math. Soc., 89 (1983), 457-460
14. Legendre type polynomials under an indefinite inner product (with A.M.
Krall)
S.I.A.M. Journal Math. Analysis, 14 (1983), 399-402
15. Volterra-Stieltjes Integral Equations and Generalized Ordinary Differential
Expressions (Monograph)
LECTURE NOTES IN MATHEMATICS, 989, Springer-Verlag, New York,
1983, xiv, 318 pp.
16. On the eigenvalues of non-definite elliptic operators (with J. Fleckinger)
in Spectral Theory of Differential Operators, North-Holland, Amsterdam, 1983:
219-227
17. Asymptotic distribution of the eigenvalues of indefinite Sturm-Liouville
problems
in Ordinary Differential Equations and Operators, Lecture Notes in Mathemat-
ics 1032, Springer-Verlag, New York, 1983: 375-383
18. Some remarks on the order of an entire function associated with a second
order differential equation
in Ordinary Differential Equations and Operators, Lecture Notes in Mathemat-
ics 1032, Springer-Verlag, New York, 1983: 384-389
19. A non-oscillation theorem for second order linear equations (with M. Kwong
and S. G. Halvorsen)
in Argonne National Laboratory No. ANL-84-73, Conference Proceedings, Ar-
gonne, Illinois, 1984: 119-122
20. Propriétés oscillatoires de l'équation de Sturm-Liouville à coefficients presque-
périodiques (with S.G. Halvorsen)
C. R. Acad. Sci. Paris, 299 (1984), 907-909

21. Oscillation of linear second order differential systems (with M.K. Kwong, H.G. Kaper, K. Akiyama)
Proc. Amer. Math. Soc., 91 (1984), 85-91
22. Some remarks on the order of an entire function associated with a second order differential equation, II
C.R. Math. Rep. Acad. Sci. Canada, 6 (1984), 79-83
23. The non-real point spectrum of generalized eigenvalue problems
C.R. Math. Rep. Acad. Sci. Canada, 6 (1984), 117-121
24. Some remarks on a generalized eigenvalue problem
in Qualitative Theory of Differential Equations, Conference Proceedings, Department of Mathematics, University of Alberta, 1985: 301-306
25. A survey of the regular weighted Sturm-Liouville problem: the non-definite case
in Applied Differential Equations, World Scientific, Singapore and Philadelphia, 1986: 109-137
26. On the oscillation of almost-periodic Sturm-Liouville operators with an arbitrary coupling constant (with S. G. Halvorsen)
Proc. Amer. Math. Soc., 97 (1986), 279-283
27. On the discrete spectra of Dirac systems (with D. Hinton, T. Read and J. Shaw)
Proc. Edinburgh Math. Soc., 29 (1986), 367-378
28. On the non-existence of positive solutions for a Schrodinger equation with an indefinite weight-function (with W. Allegretto)
C.R. Math. Rep. Acad. Sci. Canada, 8 (1986), 69-73
29. A note on some differential inequalities
Bull. Inst. Math. Acad. Sinica, 14 (1986), 287-288
30. On the existence of conjugate points for a second order ordinary differential equation
S.I.A.M. Journal Math. Analysis, 17 (1986), 1-6
31. Asymptotics of the number of zeros and of the eigenvalues of general weighted Sturm-Liouville problems (with F.V. Atkinson)
J. für die Reine und Ang. Math., 375/376 (1987), 380-393
32. Riccati techniques and variational principles in oscillation theory for linear systems (with G. Butler and L. Erbe)
Trans. Amer. Math. Soc., 303 (1987), 263-282

33. Oscillation, Bifurcation and Chaos
co-edited with F.V. Atkinson and W.F. Langford., CANADIAN MATHEMATICAL SOCIETY, VOL. 8, American Mathematical Society, Providence, 1987, xv, 740 p.
34. Non-oscillation domains of differential equations with two parameters (with S.G. Halvorsen,- Monograph)
LECTURE NOTES IN MATHEMATICS, 1338, Springer-Verlag, New York, (1988) xi, 109 p.
35. Sturm-Liouville equations with Besicovitch almost-periodicity (with A. Dzurnak)
Proc. Amer. Math. Soc., 106 (1989), 647-653
36. Boundary value problems of the second order with an indefinite weight-function (with W. Allegretto)
J. für die Reine und Ang. Math., 398 (1989), 1-24
37. Non-real eigenvalue estimates for boundary problems associated with weighted Sturm-Liouville equations
in Differential Equations and Applications, Vol II, Ohio University Press, Athens, Ohio, 1989: 222-228
38. Cross-diffusion and stability for reaction-diffusion equations (with S. Wang)
Mathematical Preprint, Series 2, No. 3, 1992 (Carleton University)
39. Sturm-Liouville problems and Hammerstein operators
J. Integral Equations Appl., 4 (1992), 83-88
40. A Laplace operator in infinite dimensional space (with S. Wang)
in Recent trends in Differential Equations, World Scientific Series in Applicable Analysis, Vol. 1, World Scientific, Singapore and Philadelphia, 1992, 431- 440.
41. A maximum principle and related problems for a Laplacian in Hilbert Space (with S. Wang)
Differential Equations and Dynamical Systems, 1 (1993), 23-34
42. On the zeros of certain cosine polynomials (with S.Y. Wang)
Proc. Amer. Math. Soc., 118 (1993), 1103-1106
43. A class of maps in an algebra with indefinite metric
Proc. Amer. Math. Soc., 121, (1994), 1177-1183
44. The ABC's of Calculus: Module on Inverse Functions (monograph)
The Nolan Company, Ottawa (1994), 78 p.
45. The Manev two-body problem: Quantitative and qualitative theory (with

- F.Diacu, V. Mioc and C. Stoica)
in Dynamical Systems and Applications, World Scientific Series in Applicable Analysis, Vol. 4, World Scientific Publishing, Singapore, 1995
46. A counter-example in the theory of almost-periodic differential equations (with F.Q. Pu and L. Zheng)
Rocky Mtn. J. Math., 25, (1), (1995), 437-440
47. The Global Flow of the Manev Problem (with J. Delgado, F. Diacu, E. Lacomba, V. Mioc, E. Perez, C. Stoica)
J. Math. Phys., 37, (1996), 2748-2761
48. An inverse matrix eigenvalue problem (with A. Alaca)
in Spectral Theory and computational methods of Sturm-Liouville Problems, D.B. Hinton and P.W. Schaefer eds., Marcel Dekker, New York, (1997), 135-148
49. On a question in almost periodic differential equations (with Zuosheng Hu)
Proc. Amer. Math. Soc. 127 (1999), pp. 2665-2670.
50. Calculus, (monograph)
Combined Preliminary Edition, The Nolan Company, Ottawa (1999-2000-2001), 704 p. ISBN 0-9698889-3-7
51. Solutions Manual to Accompany 'Calculus' (monograph)
The Nolan Company, Ottawa (1999), 124 p., ISBN 0-9698889-4-5
52. Convergence and aperiodicity in fuzzy cellular automata: revisiting rule 90 (with Flocchini, P.; Geurts, F.; Santoro, N)
Complex. Int. 6 (1999), HTML document (electronic). 68Q80
53. The canonical product of the solution of a Sturm-Liouville equation with one turning point (with A.J. Akbarfam)
Canad. Applied Math. Quarterly, 8 (4) (2000), 305-320
54. A Generalized Inverse Eigenvalue Problem for Symmetric Matrices (with K. Ghanbari)
International J. Applied Math., 4, (2) (2000), 199-209
55. Convergence and aperiodicity in Fuzzy Cellular Automata: Revisiting Rule 90
(with P. Flocchini, N. Santoro and F. Geurts). Physica D, 142 (2000), 20-28
56. "A Review of Calculus"
in Handbook of Industrial Automation, R.L. Shell and E.L. Hall (eds), Marcel Dekker, New York, (2000), 65-86.
57. Higher order asymptotic distribution of the eigenvalues of non-definite

- Sturm-Liouville problems with one turning point (with A. J. Akbarfam)
J. Comp. Applied Math. 149 (2002), 423-437
58. Fuzzy rule 110 dynamics and the golden number
 in Proceedings of the WSEAS Conferences on Systems, Nikos Mastorakis Ed.,
 Rhodos, Greece, World Scientific Engineering Academy and Society, Rhodes,
 Greece, (2003) ISBN: 960-8052-90-4 on CD-ROM., pp. 1-6.
59. Oscillation of Linear Hamiltonian Systems (with F. Meng)
Proc. Amer. Math. Soc., 131 (2003), 897-904
60. Fuzzy rule 110 dynamics and the golden number
WSEAS Trans. Computers, 2 (4) (2003), 1102-1107.
61. The dynamics of fuzzy cellular automata: Rule 30. (with E. Beres)
 in Proceedings of the WSEAS Conferences on Systems Theory and Scientific
 Computation, Nikos Mastorakis Ed., Puerto de la Cruz, Spain, Dec. 17-19,
 2004. , World Scientific Engineering Academy and Society, (2004) ISBN: 960-
 8457-06-08 on CD-ROM., pp. 1-6.
62. Higher order asymptotics of the eigenvalues of Sturm-Liouville problems
 with a turning point of arbitrary order (with Ali Jodayree Akbarfam)
Canad. Applied Math. Quarterly 12 (3) (2004), 275-301
63. Characterizing degenerate Sturm-Liouville problems
Electronic J. Diff. Eqns., 2004 (130) (2004), 1-8.
64. The dynamics of fuzzy cellular automata: Rule 30 (with E. Beres)
WSEAS Trans. Circuits and Systems, 10 (3) (2004), 2211-2216.
65. Note on a non-oscillation theorem of Atkinson (with S. Dubé)
Electron. J. Diff. Eqns., Vol. 2004 (22) (2004), pp. 1-6.
66. On a Theorem of Favard (with Z. Hu)
Proc. Amer. Math. Soc., 132 (2004), 417-428.
67. Nonlinear functionals in oscillation theory of matrix differential systems
Comm. Pure Applied Analysis, 3 (1) (2004), 75-84.
68. Oscillation and non-oscillation theorems for non-conjoined second order
 matrix differential systems (with N. Parhi)
 in Proceedings of The 2005 International Conference on Scientific Computing,
 CSC 2005, Las Vegas, Nevada, USA, June 20-23,2005, H.R.Arabnia and G.A.
 Gravvanis,eds. CSREA Press. 258-265.
69. The dynamics of general fuzzy cellular automata
 In Proceedings of the International Conference on Computational Science, Emory

University, Atlanta, May 22-25, 2005. Lecture Notes in Computer Science, 3515 Springer-Verlag, New York, 2005, 351-359.

70. A glimpse into the life and times of F.V. Atkinson
Math. Nachr , 278 (12-13) (2005), 1-29.

71. Conjugate points in the gravitational n-body problem (with C. M. F. Mingarelli)
Celestial Mechanics and Dynamical Astronomy , 91 (2005), 391-401

72. Duality for an inverse Sturm-Liouville problem (with A. Jodayree Akbarfam)
J. Math. Analysis Appl. 312 (2), (2005), 435-463

73. Favard's Theorem for Almost Periodic Processes on Banach Space (with Z. Hu)
Dynamic Systems Appl., 14 (2005), 615-632.

74. Nonlinear functionals in differential matrix systems oscillation and a theorem of Sun (with S. Dubé)
J. Math. Analysis Appl. 308 (1) (2005), 208-220

75. The uniqueness of the solution of dual equations of an inverse indefinite Sturm-Liouville problem (with A. Jodayree Akbarfam and H. Kheiri)
J. Math. Analysis Appl. 306 (1) (2005), 269-281

76. A non-oscillation theorem for differential matrix systems (with S. Dubé)
J. Math. Analysis Appl. 306 (1) (2005), 349-363

77. Almost periodicity of solutions for evolution equations (with Z. Hu)
Differential and Integral Equations, 18 (4) (2005), 469-480

78. On the dynamics of some exceptional fuzzy cellular automata (with D. Dunne)
in El Yacoubi et al (Eds), ACRI 2006, Lecture Notes in Computer Science 4173, Springer-Verlag, Berlin, Heidelberg, 2006, 71-87.

79. On the decidability of the evolution of the fuzzy cellular automaton, FCA 184 (with S. El Yacoubi)
in V.N.Alexandrov et al. (Eds), ICCS 2006, Part III, Lecture Notes in Computer Science 3993, Springer-Verlag, Berlin, Heidelberg, 2006: 360-366.

80. A study of fuzzy and many-valued logics in cellular automata
J. Cellular Automata, 1 (3) (2006), 233-252

81. On the existence of solutions an abstract integral equation of Chandrasekhar type in the theory of radiative transfer. (with K. Sadarangani and J. Caballero)

- Electron. J. Diff. Eqns., 2006 (2006), (57) 1-11
82. The infinite product representation of solutions of Sturm-Liouville problems with two turning points (with Ali Jodayree Akbarfam)
Arabian J. of Science and Technology 31 (1A), (2006), 69-85
83. The global evolution of general fuzzy cellular automata
J. Cellular Automata, 1 (2) (2006), 141-164
84. Aymptotic solutions of forced nonlinear second order differential equations and their extensions (with K. Sadarangani)
Electron. J. Diff. Eqns., Vol. 2007(2007), No. 40, pp. 1-40.
85. Obituary Notice on behalf of the Royal Society of Edinburgh (FV Atkinson, 1916-2002)
Electronic note at http://www.rse.org.uk/fellowship/obits/obits_alpha/Atkinson_fdv.pdf
86. Forced oscillation of higher order nonlinear differential equations (with Y.G. Sun)
Applied Math. Comput. **190** (1) (2007), 905-911
87. Control of fuzzy cellular automata: the case of rule 90 (with Samira El Yacoubi)
In Parallel Computing Technologies, V. Malyshkin Ed., Proceedings of the 9th International Conference, PaCT 2007, Pereslav-Zalessky, Sept. 2007. Lecture Notes in Computer Sciences Vol. 4671, Springer, New York, (2007): 477-486.
88. On the irrationality of Ramanujan's mock theta functions and other q-series at infinitely many points
Preprint: ArXiv:math/NT/0712.4002, (2007), 11 pages
89. Abstract factorial functions and their applications
Preprint: ArXiv:math/NT/0705.4299, (2007), 21 pages
90. Remarks on an 1828 theorem of Clausen
Preprint: arXiv:0806.2961, (2008), 3 pages
91. Bochner's theorem and Stepanov almost periodic functions (with Z. Hu)
Annali di Mat. Pura ed Appl., 187, (4) (2008), 719-736
92. Solution to Problem 11290 (with J.M. Pacheco, A.Plaza)
Amer. Math. Monthly, 115, (12) (2008), 952
93. Controlling the dynamics of the fuzzy cellular automaton, Rule 90, I (with S. El Yacoubi)
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Bessel type with a pole in the dependent variable (with J.M. Pacheco-Castelao
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Atkinson)
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100. Controlling the dynamics of FCA Rule 90 in $[0; 1]^T$ (with S. El Yacoubi)
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coubi)
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numbers
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EXTERNAL REFEREE FOR THE GRANTING AGENCIES

PREA, Premiers Research Excellence Awards, Ontario (2003)
The Canada Council, Killam Research Fellowships Program (1995)
N.S.F. U.S.A.: The National Science Foundation (sporadically since 1990)
N.S.E.R.C. Canada: The Natural Sciences and Engineering Research Council of Canada (almost yearly)
F.C.A.R. Québec: Fonds pour la Formation de Chercheurs et l'Aide à la Recherche
N.A.T.O. Geneva: North Atlantic Treaty Organization (occasionally)
F.R.D. South Africa: Foundation for Research Development
External Assessor for OCGS (Ontario Council for Graduate Studies), 1996
MITACS Canada, Reviewer (2007- present)

PROFESSIONAL ACTIVITIES

Advisory Board Member and Editor, Mathematische Nachrichten (since 2004)
Board Member, International Review of Pure and Applied Mathematics (since 2004)
Associate Editor, International Journal of Mathematical Sciences (since 2003)
Co-Editor of the special volume of the Mathematische Nachrichten dedicated to FV Atkinson, Vol. 278, 12-13, (2005)
Associate Editor of Differential Equations and Dynamical Systems (1992-1994)
Associate Editor of Qualitative Theory of Differential Equations and Applications (2006)
Associate Editor of Advances in Differential Equations and Control Processes (2007-2010)

EXTERNAL REFEREE FOR THE JOURNALS

Transactions of the American Mathematical Society
Proceedings of the American Mathematical Society
Memoirs of the American Mathematical Society
Canadian Journal of Mathematics
Canadian Mathematical Bulletin
Journal of Differential Equations
Journal of the London Mathematical Society
Proceedings of the Royal Society of Edinburgh
Proceedings of the Edinburgh Mathematical Society
Proceedings of the London Mathematical Society
Journal of the London Mathematical Society
Zeitschrift für Analysis und ihre Anwendungen
Rocky Mountain Journal of Mathematics

Communications in Partial Differential Equations
Mathematische Nachrichten
Journal of Computational Physics
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S.I.A.M. Journal of Mathematical Analysis
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National Examiner for the Professional Engineers of Ontario (PEO). Duties included setting the national examinations for Mathematics 98-BS-1 and 98-BS-5 for certification by the Society (1996-2001)