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EDUCATION

B.S. (Electrical Engineering), University of New Hampshire, 1960

M.S. (Mathematics), University of New Hampshire, 1961

Ph.D. (Mathematics), Stanford University, 1966

PROFESSIONAL CAREER

Summer 1961: Mathematician: David Sarnoff Research Center, RCA, Princeton

Summers 1962-63: Mathematician: General Electric Research Laboratory, Schenectady, New York

Spring Semester 1966: Assistant Professor: University of North Carolina, Chapel Hill

Summer 1966: Member Technical Staff: Bell Telephone Laboratories, Inc., Whippany, New Jersey

1966-67: Visiting Member: Courant Institute of Mathematical Sciences, New York University

1967-68: Research Member: Mathematics Research Center, U.S. Army, University of Wisconsin

1968-69: Assistant Professor: New York University

1969-73: Associate Professor: New York University

1971-72: Senior Visiting Fellow: University of Edinburgh, Edinburgh, Scotland, (North British Symposium on Differential Equations)

1973-81: Professor: University of Arizona, Tucson

1976-81: Chairman: Committee on Applied Mathematics, University of Arizona, Tucson

1979-80: Sabbatical leave: Stanford University

1981-84: Chairman: Mathematical Sciences, Rensselaer Polytechnic Institute

1981-91: Professor: Rensselaer Polytechnic Institute

1987-88: Sabbatical leave: Technische Universität Wien (Gastprofessor)

1989-91: Ford Foundation Professor: Rensselaer Polytechnic Institute

1991-Present: Professor: Applied Mathematics, University of Washington (Chair 1991-1993)

1994-1995: Sabbatical Leave: Université Lyon 1 and University of Cambridge

SOCIETY MEMBERSHIP

American Mathematical Society:

Task Force on Policy Assessment, 1991

Committee on Publications, 1996-1999

Society for Industrial and Applied Mathematics:

Editorial Board, Journal on Mathematical Analysis, 1973-1986

Visiting Lectureship Committee, 1975-77

Education Committee, 1978-81

Visiting Consultants Panel, 1979-1983

Program Committee, 1982-1992

Program Committee, 30th Anniversary Meeting, Stanford, 1982

Committee on Committees, 1983-1993

Publications Committee, 1984-1990

Chairman, Program Committee, National Meeting, Boston, 1986

Council, 1980-82 (Representative to the Board), 1990-1993

Board of Assessment, Computing and Applied Mathematics Laboratory, National Institute of Standards and Technology, 1992-1994

Chair, Review Committee, School of Mathematical Sciences, Australian National University, 1995

Life Fellow, Clare Hall, Cambridge, 1995-

Review Committee, Program in Computational Mathematics and Scientific Computation, Stanford University, 1997

Board of Directors/Advisory Board, Pacific Institute for the Mathematical Sciences, Canada, 1997-

Chair, Review Committee, Department of Mathematical Sciences, University of Delaware, 2000 (also GIG grant, 1999-)

Review Committee, Department of Mathematics and Statistics, University of Montreal, 2000

National Science Foundation POWRE panelist, 2000

INVITED LECTURES	Special Session, AMS Meeting, Tucson, 1973; Los Angeles, 1974

Conference on Constructive and Computational Methods, Bloomington, 1974

International Conference on Differential Equations, Los Angeles, 1974

Mexico-United States Symposium on Differential Equations, Mexico City, 1975

Applied Mathematics Workshop, Canadian Mathematical Congress Summer Research Institute, 1975

Symposium on Singular Perturbation Problems and Boundary Layer Theory, Lyon, France, 1976

Instructional Conference on Mathematical Control Theory, Canberra, Australia, 1977

Conference on Differential Equations, Dundee, Scotland, 1978

Conference on the Numerical Analysis of Singular Perturbation Problems, Nijmegen, 1978

MAA/SIAM Panel: Upper level mathematical modeling courses and seminars, San Antonio, 1980

Numerical Integration of Differential Equations, Bielefeld, West Germany, 1980

Advanced Seminar on Singular Perturbations and Asymptotics, Madison, 1980

International Conference on Boundary and Interior Layers, Dublin, 1980

Conference on the Modeling of Chemical Reaction Systems, Heidelberg, West Germany, 1980

Mathematical Methods for Nonlinear Circuits and Systems, Chicago, 1981

Conference on Singular Perturbations, Oberwolfach, 1981

International Conference on Stiff Computation, Park City, 1982

Seminar on Singular Perturbations in Optimal Control, Udine, 1982

IFAC Workshop on Singular Perturbations and Robustness of Control Systems, Ohrid, 1982

Special Session, History of Mathematics, AMS Annual Meeting, Denver, 1983

Second Workshop on Numerical Solution of Boundary Value Problems, Vancouver, 1984

Canadian Applied Mathematics Society, Vancouver, 1984

Joint U.S.-Scandinavian Symposium on Scientific Computing and Mathematical Modeling, Stockholm, 1985

Fifth International Conference on Boundary and Interior Layers, Shanghai, 1988

Special Session, Singular Perturbations, AMS Annual Meeting, Phoenix, 1989

Symposium on Asymptotic and Computational Analysis, Winnipeg, 1989

Differential Equations Conference, Dublin, 1989

Computational ODE's Conference, London, 1989

Workshop on Asymptotic Analysis and Numerical Solution of PDEs, Argonne, 1990

UC-NASA Nonlinear Control Workshop, Santa Barbara, 1990

Panel discussion, The Responsibilities of Mathematicians for the Implementation of the David II Report, Joint Mathematics Meeting, Columbus, 1990

Conference of Singular Perturbations, Oberwolfach, 1991

Organizer, Minisymposium on the History of Singular Perturbations, ICIAM 91, Washington, 1991

Participant, Program on Semiconductors, IMA, Minneapolis, 1991

Workshop on Asymptotic Analysis and Numerical Solution of PDEs, Beaune, 1992

International Conference on Scientific Computation and Differential Equations, Auckland, 1993

Meeting on Differential-Algebraic Equations, Oberwolfach, 1993

Workshop on Perturbation Methods in Physical Mathematics, Troy, 1993

International Symposium on Ordinary Differential Equations and Applications, Kalamazoo, 1993

SIAM National Meeting, Philadelphia, 1993

Conference on Methods and Applications of Analysis, Hong Kong, 1994

Conference on Numerical Singular Perturbations, Oberwolfach, 1995 and 1998

Conference on Singular Perturbations and Exponential Asymptotics, Luminy, 1996 and 1998 (co-Chair)

American Mathematical Society Meeting, Corvallis, 1997

American Mathematical Society Shortcourse on Singular Perturbations, Baltimore, 1998 (co-Chair)

Mathematical Association of America, Pullman, 1998

Singular Perturbations of the Turning Point of the Millenium, Rensselaer, 1999

International Workshop on Special Functions, Hong Kong, 1999

Singular Perturbations 2000, Adelaide

RESEARCH INTERESTS

Relationship between singular perturbation theory and various regularization methods for differential-algebraic systems; geometric approaches to understanding the limiting solutions to singularly perturbed boundary value problems; the motion of shock layers and other interfaces; the interplay between asymptotic and numerical methods; difficult problems of asymptotic matching; teaching differential equations.

PUBLICATIONS

1. "Consideration of a Hill-Climbing Methods of Roe", General Electric Research Laboratory Report, 63-RL-3327E, 1963.
2. "A Discrete Variational Problem with Inequality Constraints", General Electric Research Laboratory Report, 63-RL-3494, 1963.
3. "Two-Parameter Singular Perturbation Problems", Dissertation, Stanford University, December 1965, 210 pp.
4. "Lectures on Singular Perturbations", Bell Telephone Laboratories, Inc., Summer 1966, 208 pp.
5. "The Asymptotic Evaluation of Integrals, Technical Memo", Bell Telephone Laboratories, Inc., Summer 1966, 55 pp.

6. "Singular perturbations of boundary value problems for linear ordinary differential equations involving two parameters", *J. Math. Anal. Appl.*, **19**, 291-308, 1967.

7. "Two-parameter singular perturbation problems for second order equations," *J. Math. Mech.*, **16**, 1143-1164, 1967.

8. "The first boundary value problem for certain linear elliptic equations involving two small parameters," *Arch. Rational Mech. Anal.*, **26**, 68-82, 1967.

9. "A boundary value problem for certain nonlinear second order differential equations with a small parameter," *Arch. Rational Mech. Anal.*, **29**, 66-74, 1968.

10. "Loss of boundary conditions in the asymptotic solution of linear ordinary differential equations, I. Eigenvalue problems," *Comm. Pure Appl. Math.*, **21**, 243-261, 1968 (with G.H. Handelman and J.B. Keller).

11. "Loss of boundary conditions in the asymptotic solution of linear ordinary differential equations. II. Boundary value problems," *Comm. Pure Appl. Math.*, **21**, 263-270, 1968 (with J.B. Keller).

12. "Topics in singular perturbations," *Advances in Mathematics*, **2**, 365-470, 1968.

13. "Boundary value problems for linear systems of ordinary differential equations involving many small parameters," *J. Math. Mech.*, **18**, 835-856, 1969.

14. "On a boundary value problem for a nonlinear differential equation with a small parameter," *J. Math. Mech.*, **17**, 569-581, 1969.

15. "On the asymptotic solution of boundary value problems for nonhomogeneous ordinary differential equations containing a parameter," *J. Math. Anal. Appl.*, **28**, 450-460, 1969.

16. "A nonlinear singular perturbation problem arising in the study of chemical flow reactors," *J. Inst. Math. Appl.*, **6**, 12-21, 1970.

17. "On the asymptotic solution of multi-point boundary value problems," *J. Diff. Equations*, **7**, 356-366, 1970.

18. "On singular perturbation problems with interior nonuniformities," *J. Math. Mech.*, **19**, 1103-1112, 1970.

19. "Topics in singular perturbations," *Lectures on Ordinary Differential Equations*, R. McKelvey, editor, Academic Press, New York, 155-260, 1970.

20. "Singular perturbation of boundary value problem for a system of nonlinear differential equations," *J. Diff. Equations*, **8**, 431-447, 1970.

21. "On boundary value problems for a singularly perturbed differential equation with a turning point," *SIAM J. Math. Anal.*, **1**, 479-490, 1970.

22. "On boundary layer problems exhibiting resonance," *Studies in Appl. Math.*, **49**, 277-295, 1970 (with R.C. Ackerberg).

23. "Some Nonlinear Singular Perturbation Problems," Report No. 70-13, *Series in Applied Mathematics*, Northwestern University, August 1970.

24. "Singular perturbations of nonlinear boundary value problems," *Proc. Eighth Annual Allerton Conference on Circuit and System Theory*, 322-330, October 1970.

25. "On the asymptotic solution of multi-point boundary value problems with discontinuous coefficients," *Indiana U. Math. J.*, **20**, 667-682, 1971 (with P.K. Mazaika).

26. "On initial value problems for nonlinear systems of differential equations with two small parameters," *Arch. Rational Mech. Anal.*, **40**, 200-222, 1971.

27. "On the asymptotic solution of initial value problems for differential equations with a small delay," *SIAM J. Math. Anal.*, **2**, 259-268, 1971.

28. "Boundary layer methods for nonlinear initial value problems," *SIAM Review,* **13**, 425-435, 1971 (SIAM Fall Meeting, Boston, 1970).

29. "The singularly perturbed linear state regulator problem," *SIAM J. Control*, **10**, 399-413, 1972.

30. "Singular perturbations and the linear state regulator problem," *Ordinary Differential Equations*, 1971, NRL-MRC Conference, L. Weiss, editor, Academic Press, New York, 541-544, 1972.

31. "Singular perturbation of the time-invariant linear state regulator problem," *J. Diff. Equations*, **12**, 117-128, 1972.

32. "Multiple solutions of a singularly perturbed boundary value problem arising in chemical reactor theory," *Lecture Notes in Mathematics*, **280**, Springer-Verlag, Berlin, 314-319, 1972 (with J. Chen). (Conference on the Theory of Ordinary and Partial Differential Equations, Dundee, 1972.)

33. "On multiple solutions of a singular perturbation problem," *Arch. Rational Mech. Anal.*, **49**, 89-98, 1972.

34. "On the asymptotic solution of certain nonlinear singularly perturbed optimal control problems," *Singular Perturbations: Order Reduction in Control System Design*, American Society of Mechanical Engineers, New York, 44-56, 1972. (Joint Automatic Control Conference, Stanford, 1972.)

35. "Introduction to Singular Perturbations," Lecture Notes, University of Edinburgh, 186 pp., 1972.

36. "Examples illustrating the connection between singular perturbations and singular arcs," *Proc. Eleventh Annual Allerton Conference on Circuit Theory*, 678-685, 1973.

37. "The matrix Riccati approach to a singularly perturbed regulator problem," *J. Diff. Equations*, **16**, 413-427, 1974 (with C.F. Kung).

38. "Boundary layer methods for ordinary differential equations with small coefficients multi-plying the highest derivatives," *Lecture Notes in Mathematics*, **340**, Springer-Verlag, Berlin, 363-389, 1974. (Conference on Constructive and Computational Methods, Bloomington, 1974.)

39. "Further results on singular perturbations and singular arcs," *Proc. Twelfth Annual Allerton Conference on Circuit Theory*, 803-808, 1974 (with A. Jameson).

40. "Boundary layer methods for certain nonlinear singularly perturbed optimal control problems," *J. Math. Anal. Appl.*, **45**, 468-484, 1974.

41. "On the asymptotic solution of a two-parameter boundary value problem of chemical reactor theory," *SIAM J. Math. Anal.*, **26**, 717-729, 1974 (with J. Chen).

42. "Introduction to Singular Perturbations," Academic Press, New York, 1974 (Chinese edition, 1983).

43. "On two methods of solution for a singularly perturbed linear state regulator problem," *SIAM Review*, **17**, 16-37, 1975.

44. "The singularly perturbed linear state regulator problem II," *SIAM J. Control*, **13**, 327-337, 1975 (with C.F. Kung).

45. "Cheap control, singular arcs, and singular perturbations," *Lecture Notes in Economics and Math. Systems*, **106**, Springer-Verlag, Berlin, 285-295, 1974. (Fourteenth Biennial Seminar, Canadian Mathematical Congress, London, Ontario, 1973.)

46. "Singular perturbations and singular arcs I," *IEEE Trans. Automatic Control*, **20**, 218-226, 1975 (with A. Jameson).

47. "Cheap control of the time-invariant regulator," *Applied Math. and Optimization*, **1**, 337-354, 1975 (with A. Jameson).

48. "The singular perturbation approach to singular arcs," *Int. Conf. on Differential Equations*, H.A. Antosiewicz, editor, Academic Press, New York, 595-611, 1975.

49. "Phase-plane solutions to some singular perturbation problems," *J. Math. Anal. Appl.*, **54**, 449-466, 1976.

50. "Singular perturbations and order reduction in control theory: An overview," *Automatica*, **12**, 123-132, 1976 (with P.V. Kokotovic and P. Sannuti). (Sixth Triennial World IFAC Congress, Boston, 1975.)

51. "The nearly singular linear regulator problem," *Ecuaciones Differenciales*, C. Imaz, editor, Fondo de Cultura Econom., Mexico City, 289-315, 1976.

52. "*The numerical solution of boundary value problems for stiff differential equations,*" Mathematics of Computation, **31**, 66-93, 1977 (with J.E. Flaherty).

53. "A more direct solution of the nearly singular regulator problem," *SIAM J.Control Optimization,* **14**, 1063-1077, 1976.

54. "Asymptotic methods and singular perturbations," *SIAM-AMS Proceedings,* **10**, 1976 (editor); American Math. Society, Providence, Rhode Island (Symposium, New York, 1976).

55. "Singular perturbations and singular arcs II," *IEEE Trans. Automatic Control,* **22**, 328-337, 1977 (with A. Jameson).

56. "On the computation of singular controls," *IEEE Trans. Automatic Control,* **22**, 640-648, 1977 (with J.E. Flaherty).

57. "Singular singular-perturbation problems," *Lecture Notes in Mathematics,* **594**, Springer-Verlag, Berlin, 422-436, 1977 (with J.E. Flaherty). (Symposium on Singular Perturbation Problems and Boundary Layer Theory, Lyon, 1976.)

58. "Singular Perturbation Analysis for Ordinary Differential Equations," Communications of the Mathematical Institute, Rijksuniversiteit Utrecht, 59 pp., 5/1977.

59. "High gain feedback systems as singular singular perturbation problems," *Proceedings, 1977 Joint Automatic Control Conference*, 1278-1281.

60. "On singular singularly-perturbed initial value problems," *Applicable Analysis,* **8**, 71-81, 1978.

61. "Partially singular control problems as singular singular-perturbation problems," Preprints, Seventh Triennial World IFAC Congress, Helsinki, 957-961, 1978.

62. "Singular perturbations of semilinear second order systems," *Lecture Notes in Mathematics,* **827**, 131-150, 1980 (with F.A. Howes). (Conference on Differential Equations, Dundee, 1978.)

63. "Singular perturbations, order reduction, and decoupling of large-scale systems," *Numerical Analysis of Singular Perturbations Problems*, (with L.R. Anderson), P.W. Hemker and J.J.H. Miller, editors, Academic Press, London, 317-338, (Nijmegen Conference, 1978).

64. "The numerical solution of singular singularly-perturbed initial value problems," *Numerical Analysis of Singular Perturbation Problems* (with J.E. Flaherty), P.W. Hemker and J.J.H. Miller, editors, Academic Press, London, 143 and 152-180. (Nijmegen Conference, 1978.)

65. "Singular perturbations and slow-mode approximations for large-scale linear systems," Proceedings, *IRIA-IFAC Workshop in Singular Perturbations in Control*, 113-120, June 1978 (with L.R. Anderson).

66. "Analytical and numerical methods for nonlinear singular singularly perturbed initial value problems," *SIAM J. Appl. Math.,* **38**, 225-248, 1980 (with J.E. Flaherty).

67. "One viewpoint on graduate education in applied mathematics," *Graduate Education in the Mathematical Sciences*, Rocky Mountain Mathematics Consortium, 114-122, 1979.

68. "A singular perturbations approach to reduced-order modeling and decoupling for large scale linear systems," *Lecture Notes in Mathematics*, **968**, Springer-Verlag, Berlin, 246-255, 1982.

69. "On multiple solutions of singularly perturbed systems in the conditionally stable case," *Singular Perturbations and Asymptotics,* R.E. Meyer and S.V. Parter, editors, Academic Press, New York, 87-108, 1980.

70. "On the numerical integration of two-point boundary value problems for stiff systems of ordinary differential equations," *Boundary and Interior Layers æ Computational and Asymptotic*

Methods, Boole Press, Dublin, 93-102, 1980 (with J.E. Flaherty).

71. "Analytic methods for the approximate solution of singularly perturbed systems," *Modelling of Chemical Reaction Systems*, K.H. Ebert, P. Deuflhard, and W. Jager, editors, Springer-Verlag, Berlin, 20-30, 1981.

72. "Time-scale decoupling and order reduction for linear time-varying systems," *Optimal Control: Applications and Methods,* **3**, 133-153, 1982 (with L.R. Anderson).

73. "Singularly perturbed boundary value problems for nonlinear systems, including a challenging problem for a nonlinear beam," *Lecture Notes in Mathematics*, **942**, Springer-Verlag, Berlin, 170-191, 1982 (with J.E. Flaherty). (Oberwolfach Conference, 1981.)

74. "Asymptotic and numerical methods for vector systems of singularly perturbed boundary value problems," *Proceedings, 1982 Army Numerical Analysis and Computers Conference*, Army Research Office, Research Triangle Park, 381-395, 1982 (with J.E. Flaherty).

75. "Shock and transition layers for singularly perturbed second-order vector systems," *SIAM J. Appl. Math.*, **43**, 935-943, 1983.

76. "Decoupling of boundary value problems for two-time-scale systems," *Stiff Computation*, R.C. Aiken, editor, Oxford University Press, 104-111, 1985 (with R.M.M. Mattheij). (Park City Conference, 1982.)

77. "Slow-fast decoupling: Analytical and numerical aspects," *Singular Perturbations in Systems and Control,* 143-160, M. Ardema, editor, Springer-Verlag, Wien, 1983. (Udine Conference, 1982.)

78. "On nonlinear optimal control problems," *Singular Perturbations in Systems and Control*, 93-101, M. Ardema, editor, Springer-Verlag, Wien, 1983. (Udine Conference, 1982.)

79. "On the numerical solution of singularly perturbed vector boundary value problems," *Proceedings, 10th IMACS World Congress*, 1982 (with J.E. Flaherty).

80. "Slow/fast decoupling for linear boundary value problems," *Lecture Notes in Mathematics*, **985**, Springer-Verlag, Berlin, 248-266, 1983.

81. "Numerical methods for stiff systems of two-point boundary value problems," *SIAM J. Sci. Stat. Comput.*, **5**, 865-886, 1984 (with J.E. Flaherty) (also an ICASE report).

82. "On solving boundary value problems for multi-scale systems of two-point boundary value problems," *BIT,* **24**, 609-622, 1984 (with R.M.M. Mattheij).

83. "On the simultaneous use of asymptotic and numerical methods to solve non-linear two point problems with boundary and interior layers," *Numerical Boundary Value ODE's,* U. Ascher and R. Russell, editors, Birkhauser, Boston, 149-172, 1985.

84. "Singular Perturbation in Systems and Control," *IEEE Press,* 1986, (P.V. Kokotovic and H.K. Khalil, editors) has reprinted articles by Kokotovic, Sannuti, and O'Malley (*Automatica*, 1976), O'Malley (*SIAM J. Control*, 1972), O'Malley (*J. Math. Anal. Appl.*, 1974), and O'Malley and Jameson (*IEEE Trans. Automatic Control*, 1977).

85. "On nonlinear singularly perturbed initial value problems," *SIAM Review,* **30**, 193-212, 1988.

86. "On singular singularly-perturbed initial value problems," *SIAM J. Appl. Math.*, **49**, 1-25, 1989 (with Z.-M. Gu and N.N. Nefedov).

87. "Different perspectives on some singular perturbation problems," *Acta Científica Venezolana,* **38**, 657-672, 1987.

88. "The limiting solution for a semiconductor device model," *Proceedings, Bail V Conference*, Boole Press, Dublin, 1988, 54-64 (with C. Schmeiser).

89. "The asymptotic solution of a semiconductor device problem involving reverse bias," *SIAM J. Appl. Math.*, **50**, 1990, 504-520 (with C. Schmeiser).

90. "Singular Perturbation Methods for Ordinary Differential Equations," Springer-Verlag, New York, 1991.

91. "Singularly perturbed boundary value problems viewed in the Lienard plane," *Asymptotic and Computational Analysis*, R. Wong, editor, M. Dekker, New York, 357-378, 1990 (with J.D. Allen).

92. "Singular perturbations, asymptotic evaluation of integrals, and computational challenges," Asymptotic Analysis and the Numerical Solution of Partial Differential Equations, H.G. Kaper and M. Garbey, editors, M. Dekker, New York, 3-16, 1992.

93. "Singular perturbation phenomena for two-point boundary value problems," *Computational Ordinary Differential Equations*, J.R. Cash and I. Gladwell, editors, Clarendon Press, Oxford, 1992, 175-191.

94. "The regularization of linear differential-algebraic equations," *SIAM J. Math. Anal.*, 27(1996), 258-273 (with L.V. Kalachev).

95. "The regularization of nonlinear differential-algebraic equations," *SIAM J. Math. Anal.*, 25(1994), 615-629 (with L.V. Kalachev).

96. "Supersensitive boundary value problems," *Asymptotic and Numerical Methods for Partial Differential Equations with Critical Parameters*, H.G. Kaper and M. Garbey, editors, Kluwer, Dordrecht, 1993, 215-223 (with J.G. Laforgue).

97. "Shock layer movement for Burgers' equation," *SIAM J. Appl. Math.*, 55(1995), 332-347 (with J.G.L. Laforgue).

98. ICIAM 91, SIAM, Philadelphia, 1992 (editor).

99. "Boundary value problems for differential-algebraic equations," *J. Func. Anal. Opt.*, 16(1995), 363-378 (with L.V. Kalachev).

100. "On regularizing differential-algebraic equations," *Trends and Developments of Ordinary Differential Equations*, Y. Alavi and P.F. Hsieh, editors, World Scientific, 1994, 231-242 (with L.V. Kalachev).

101. "On the motion of viscous shocks and the supersensitivity of their steady-state limits," *Math. Appl. Anal.*, 1(1995), 465-487 (with J.G.L. Laforgue).

102. "On singular perturbations, especially matching," *SIAM Review* **36**(1995), 412-414.

103. "Viscous shock-motion for advection-diffusion equations", *Studies in Applied Math.* **95**(1995), 147-170 (with J.G.L. Laforgue).

104. "On the metastable and supersensitive motion of shocks for viscous conservation laws in one space dimension", *Nonlinear Problems in Applied Mathematics*, T.S. Angell, L.P. Cook, R.E. Kleinman, and W.E. Olmstead, editors, SIAM, 1996, 169-176 (with J.G.L. Laforgue).

105. "Exponential asymptotics, boundary layer resonance, and dynamic metastability", *Mathematics is for Solving Problems*, L.P. Cook, V. Royburd, and M. Tulin, editors, SIAM, 1996, 189-203 (with M.J. Ward).

106. *Thinking About Ordinary Differential Equations*, Cambridge University Press, 1997.

107. "Stiff differential equations and singular perturbations", Technical Report, Australian National University, 1996.

108. "Metastable travelling wave solutions of singularly perturbed reaction-diffusion equations", *Euro. J. Appl. Math.* 9 (1998), 397-416 (with J.G.L. Laforgue and M. Ward).

109. "Exponential asymptotics, the viscid Burgers equation, and standing wave solutions for a reaction-advection-diffusion model", *Studies in Applied Math.* 102 (1999), 137-172. (with J.G.L. Laforgue).

110. "Mahony's intriguing stiff equations", *J. Australian Math. Soc.*, B40 (1999), 469-474.
111. "Figuring out singular perturbations after a first course in ODEs", *Analyzing Multiscale Phenomena Using Singular Perturbation Methods*, J. Cronin and R.E. O'Malley, Jr., editors, American Math. Society, Providence, 1999, 1-22.
112. *Analyzing Multiscale Phenomena Using Singular Perturbation Methods*, American Math. Society, Providence (editor, with J. Cronin), 1999.
113. "Naive singular perturbations theory", *Math. Models and Methods in the Applied Sciences*, 11 (2001), 119-131.
114. "On the asymptotic solution of the singularly perturbed boundary value problems posed by Bohé", *J. Math. Anal. Appl.*, 242 (2000), 18-38.
115. "On exorcising secular terms", *Special Functions*, C. Dunkl, M. Ismail, and R. Wong, editors, World Scientific, Singapore, 2000, 236-246.
116. "Give your ODEs a singular perturbation", *J. Math. Anal. Appl.* 251 (2000), 433-450.
117. "A renormalization group method for nonlinear oscillations", *Studies in Appl. Math.* (2001) (with B. Mudavandu).

Last updated: Wednesday, October 25, 2000