# CURRICULUM VITAE

# ZDZISŁAW JACKIEWICZ

Professor of Mathematics Department of Mathematics Arizona State University Tempe, Arizona 85287 Born: January 27, 1950 Swiebodzin, Poland Married, 2 children

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### EDUCATION

Title of Professor, May 2006, University of Warsaw, Poland

Habilitation in Mathematics, December 1996, University of Warsaw, Poland

- Ph.D. in Mathematics, January 1980, University of Gdańsk, Poland Thesis: Convergence of multistep methods for functional differential equations Advisor: Professor Marian Kwapisz
- M.Sc. in Mathematics, June 1975, University of Gdańsk, Poland Thesis: Preserving measure diffeomorphisms of manifolds Advisor: Professor Kazimierz Gęba
- M.Sc. in Engineering, February 1974, Technical University of Gdańsk, Poland Thesis: Creep of rotating disk in a high temperature Advisor: Professor Józef Więckowski

# PROFESSIONAL EXPERIENCE

#### Positions held

1990 - Present	Professor of Mathematics, Department of Mathematics, Arizona State
	University, Tempe, Arizona 85287
1987 - 1990	Associate Professor of Mathematics, Department of Mathematics, Arizona
	State University, Tempe, Arizona 85287
1986 - 1987	Associate Professor of Mathematics, Department of Mathematical Sciences,
	University of Arkansas, Fayetteville, Arkansas 72701
1982 - 1986	Assistant Professor of Mathematics, Department of Mathematical Sciences,
	University of Arkansas, Fayetteville, Arkansas 72701
1981 - 1982	Visiting Assistant Professor of Mathematics, Department of Mathematics
	and Statistics, University of South Carolina, Columbia, South Carolina 29208
1980 - 1981	Assistant Professor of Mathematics, Institute of Mathematics, University of
	Gdansk, Poland
1976 - 1980	Instructor of Mathematics, Institute of Mathematics, University of
	Gdansk, Poland
1975 - 1976	Visiting Research Mathematician, Institute of Fundamental Technical
	Problems of the Polish Academy of Sciences, Warszawa, Poland

# **Teaching Experience**

 Undergraduate: Calculus, Ordinary Differential Equations, Advanced Applied Mathematics I and II, Linear Algebra, Finite Mathematics
Graduate: Numerical Analysis I and II, Integral Transforms, Applied Computational Methods, Advanced Numerical Analysis, Numerical Solution of Ordinary Differential Equations, Numerical Solution of Stiff Differential Systems, Numerical Linear Algebra, Modeling and Computational Biology, Applications and Complex Problem Solving in Computational Biology

# **PROFESSIONAL SERVICE**

Editor for Applied Numerical Mathematics, Numerical Algorithms, and Opuscula Mathematica

Reviewer for Zentralblatt für Mathematik and Computing Reviews

Referee for SIAM Journal on Numerical Analysis, SIAM Review, IMA Journal of Numerical Analysis, Applied Numerical Mathematics, Journal of Computational and Applied Mathematics, Journal of Difference Equations, BIT, Journal of Mathematical Analysis and Applications, Journal of Integral Equations, Journal of Scientific Computing, Computers & Mathematics with Applications, Journal of the Association for Computing Machinery, NSF Mathematical Sciences

Member, Society for Industrial and Applied Mathematics (SIAM)

Editor of the Proceedings "Estimation and Control of Distributed Systems", *The University of Arkansas Eighth Lecture Series in the Mathematical Sciences*, April 12–14, 1984, Fayetteville.

Co-editor of special issue of *Applied Numerical Mathematics* devoted to the International Conference on the Numerical Solution of Volterra and Delay Equations, May 25–28, 1990, Tempe, Arizona.

Co-editor of special issue of Annals of Numerical Mathematics, Volume 1, Scientific Computations and Differential Equations, 1993.

Co-editor of special issue of *Applied Numerical Mathematics* devoted to the Volterra Centennial, the Second International Conference on the Numerical Solution of Volterra and Delay Equations, May 27–30, 1996, Tempe, Arizona.

Co-editor of special issue of *Applied Numerical Mathematics* devoted to the Third International Conference on the Numerical Solution of Volterra and Delay Equations, May 18–21, 2004, Tempe, Arizona.

Co-editor of special issue of *Numerical Algorithms* devoted to GLADE 2008 Conference and Workshop, July 14–25, 2008, University of Auckland, Auckland, New Zealand.

Co-editor of special issue of *Numerical Algorithms* devoted to the conference Auckland Numerical Ordinary Differential Equations (ANODE 2013), January 7–11, 2013, University of Auckland, Auckland, New Zealand.

### PRESENTATIONS

- 1. The Fourth Conference on Basic Problems in Numerical Analysis, September 4–8, 1978, Plzen, Czechoslovakia.
- 2. Workshop on Numerical Methods, September 15–21, 1978, Bukowiec, Poland.

- International Conference "Functional-Differential Systems and Related Topics I," May 19-26, 1979, Blazejewko, Poland.
- 4. International Conference on Approximation and Function Spaces, August 27–31, 1979, Gdansk, Poland.
- 5. Summer School on Numerical Analysis, September 11–23, 1980, Sielpia, Poland (Invited).
- 6. Workshop on Numerical Methods, September 24–30, 1980, Sielpia, Poland.
- International Conference "Functional-Differential Systems and Related Topics II," May 3–10, 1981, Blazejewko, Poland.
- 8. The University of Arkansas Seventh Lecture Series in the Mathematical Sciences "Numerical Analysis of Parametrized Nonlinear Equations," March 24–26, 1983, Fayetteville.
- 9. SIAM 1983 National Meeting, June 6–8, Denver, CO.
- 10. The University of Arkansas Eighth Lecture Series in the Mathematical Sciences "Estimation and Control of Distributed Systems," April 8–12, 1984, Fayetteville, AR.
- 11. SIAM 1984 Summer Meeting, July 16-20, 1984, Seattle, WA.
- International Congress on Computational and Applied Mathematics, July 24–27, 1984, Leuven, Belgium.
- Forty-seventh Annual Meeting of MAA, Oklahoma-Arkansas Section, March 29–30, 1985, University of Tulsa, Tulsa, OK.
- International Conference on Theory and Applications of Differential Equations, May 20-23, 1985, Pan American University, Edinburg, TX.
- Dundee Biennial Conference on Numerical Analysis, June 25–28, 1985, University of Dundee, Scotland.
- 16. SIAM Fall Meeting, October 28-30, 1985, Arizona State University, Tempe, AZ (Invited).
- 17. Forty-eighth Annual Meeting of MAA, Oklahoma-Arkansas Section, April 4–5, 1986, Arkansas College, Batesville, AR.
- 18. 1986 Texas Seminar in Differential Equations, April 19, 1986, North Texas State University, Denton, TX.
- 19. 1986 ODE Conference, July 28–August 1, 1986, Albuquerque, NM.
- 20. SIAM 35th Anniversary Meeting, October 12-15, 1987, Denver, CO.
- International Conference on Theory and Applications of Differential Equations, March 21–25, 1988, Columbus, OH.
- 22. The 1988 Conference on the Numerical Solution of IVPs for ODEs, June 20–24, 1988, University of Toronto, Toronto, Canada.
- Twenty-seventh IEEE Conference on Decision and Control, December 7–9, 1988, Austin, TX (Invited).
- 24. International Conference on Differential Equations and Applications to Biology and Population Dynamics, January 10–13, 1990, Claremont, CA.
- The International Conference on the Numerical Solution of Volterra and Delay Equations, May 25–28, 1990, Tempe, AZ.
- 26. ICIAM91, Second International Conference on Industrial and Applied Mathematics, July 8–12,

1991, Washington, D.C.

- 27. International Conference on Parallel Methods for Ordinary Differential Equations, September 10–13, 1991, Grado, Italy (Invited).
- 28. London Mathematical Society Symposium on Evolutionary Problems, July 4–14, 1992, University of Durham, England (Invited).
- 29. International Conference on Scientific Computation and Differential Equations, January 4–8, 1993, University of Auckland, Auckland, New Zealand (Invited).
- 2nd Hellenic European Conference on Mathematics and Informatics HERMIS 94, September 22–24, 1994, Athens, Greece (Invited).
- International Conference on Scientific Computation and Differential Equations SciCADE 95, March 28–April 1, 1995, Stanford, California.
- 32. Volterra Centennial, The Second International Conference on the Numerical Solution of Volterra and Delay Equations, May 27–30, 1996, Arizona State University, Tempe, Arizona.
- The Second World Congress of Nonlinear Analysts (WCNA-96), July 10–17, 1996, Athens, Greece (Invited).
- 34. SciCADE 97, International Conference on Scientific Computing and Differential Equations, September 15–19, 1997, Grado, Italy (Invited minisymposium).
- 35. NODEM 1998, Workshop on the Numerical Solution of Ordinary Differential Equations on Manifolds, April 2–3, 1998, Arizona State University, Tempe, Arizona.
- 36. ANODE 98: Auckland Numerical Ordinary Differential Equations, June 29–July 10, 1998, The University of Auckland, New Zealand (Invited).
- 37. SciCADE 99: International Conference on Scientific Computation and Differential Equations, August 9–13, 1999, Fraser Island, Australia (Two invited minisymposium talks).
- ANODE 99: Auckland Numerical Ordinary Differential Equations, August 16–20, 1999, The University of Auckland, New Zealand.
- 39. NUMDIFF-9: 9th Seminar on Numerical Solution of Differential and Differential-Algebraic Equations, September 4–8, 2000, Martin-Luther University, Halle, Germany (Invited).
- 40. ANODE 2001: Auckland Numerical Ordinary Differential Equations, January 8–12, 2001, The University of Auckland, New Zealand.
- 41. ICOSAHOM-01: International Conference on Spectral and High Order Methods, June 11–15, 2001, Uppsala University, Sweden.
- 42. SciCADE 2001: International Conference on Scientific Computation and Differential Equations, July 29–August 3, 2001, Vancouver, British Columbia, Canada.
- 43. The Eight International Conference on Applied Mathematics, Computer Science and Mechanics, May 30–June 2, 2002, Technical University of Cluj–Napoca, Baisoara, Romania (Invited).
- 44. Numerical Analysis 2002, June 5–9, 2002, Krynica, Poland (Invited).
- 45. Conference on Scientific Computation, June 26–29, 2002, Geneva, Switzerland.
- 46. ANODE 2003: Auckland Numerical Ordinary Differential Equations, July 14–18, 2003, The University of Auckland, New Zealand.
- 47. Advances and Challenges in Time–Integration of PDE's, August 18–20, 2003, Brown University, Providence, Rhode Island (Invited).

- NUMDIFF-10: 10th Seminar on Numerical Solution of Differential and Differential-Algebraic Equations, September 8–11, 2003, Martin-Luther University, Halle, Germany (Invited minisymposium).
- 49. The Third International Conference on the Numerical Solution of Volterra and Delay Equations, May 18–21, 2004, Arizona State University, Tempe, Arizona.
- 50. Second International Seminar on Numerical Mathematics, NAday04, June 10, 2004, University of Ljubljana, Ljubljana, Slovenia (Invited).
- 51. Modern Computational Methods in Applied Mathematics, MCM 2004, June 14–19, 2004, Bedlewo, Poland.
- Carnegie Partnership Seminar on Computational Mathematics, May 23–24, 2005, University of Jos, Nigeria (Invited).
- 53. Conference on Differential-Functional Equations, June 23–24, 2005, University of Gdansk, Poland (Invited).
- 54. Workshop on Bio-Mathematics and Numerical Analysis, December 12, 2005, University of Auckland, New Zealand (Invited).
- 55. Workshop on Innovative Methods for Solving Evolutionary Problems with Memory, June 19–21, 2006, Villa Orlandi, Anacapri, Italy (Invited).
- IWANASP 2006: Second International Workshop on Analysis and Numerical Approximation of Singular Problems, September 6–8, 2006, Karlovassi-Samos, Greece (Invited).
- 57. SciCADE 2007: International Conference on Scientific Computation and Differential Equations, July 9–13, 2007, Palais du Grand Large, Saint-Malo, France (Two invited minisymposium talks, two minisymposia organization).
- Tenth Conference on Mathematics in Technology and Natural Sciences, September 26–30, 2007, Krynica, Poland (Invited).
- 13th International Conference on Mathematical Modelling and Analysis (MMA2008) and Third International Conference on Approximation Methods and Orthogonal Expansions (AMOE2008), June 4–7, 2008, Tartu (Kaariku), Estonia (Invited).
- 60. GLADE 2008 Meeting on Numerical Methods for Differential Equations, July 14–18, University of Auckland, New Zealand (Invited).
- 61. GLADE 2008 Workshop on Numerical Methods for Differential Equations, July 21–25, Auckland University of Technology, Auckland, New Zealand (Invited).
- 62. IWANASP08: Third International Workshop on Analysis and Numerical Approximation of Singular Problems, September 10–12, 2008, Ericeira, Portugal (Invited).
- ICNAAM 2008: International Conference of Numerical Analysis and Applied Mathematics, September 16–20, 2008, Kypriotis International Conference Center, Psalidi, Kos, Greece (Invited).
- 64. The IMACS World Congress. Computational and Applied Mathematics & Applications in Science and Engineering, August 3–5, 2009, The University of Georgia, Athens, Georgia, USA (Invited).
- 12th Seminar NUMDIFF on Numerical Solution of Differential and Differential-Algebraic Equations, 14–18 September, 2009, Martin-Luther-University, Halle-Wittenberg, Germany (Invited).

- 66. ICNAAM 2009, Seventh International Conference of Numerical Analysis and Applied Mathematics, September 18–22, 2009, Rethymno, Crete, Greece (Invited).
- 15th International Conference on Mathematical Modelling and Analysis, May 26–29, 2010, Druskininkai, Lithuania (Invited).
- 16th International Conference on Mathematical Modelling and Analysis (MMA2011), May 25–28, 2011, Sigulda, Latvia (Invited).
- 69. Numerical Solution of Differential and Differential-Algebraic Equations (NUMDIFF-13), September 10–14, 2012, Martin-Luther-University Halle-Wittenberg, Germany.
- 70. Auckland Numerical Ordinary Differential Equations (ANODE 2013), January 7–11, 2013, University of Auckland, Auckland, New Zealand.
- 18th International Conference on Mathematical Modelling and Analysis (MMA2013) and Fourth International Conference on Approximation Methods and Orthogonal Expansions (AMOE2013), May 27–30, 2013, Tartu, Estonia (Invited).
- 72. 19th International Conference on Mathematical Modelling and Analysis, May 26–29, 2014, Druskininkai, Lithuania (Invited).
- 73. Seminar on Numerical Solution of Integral and Differential Equations, July 15–19, 2014, Kharantsi, Olkhon Island, Lake Baikal, Russia (Invited).
- 74. ICNAAM 2014: International Conference of Numerical Analysis and Applied Mathematics, September 22–28, 2014, Rodos Palace Hotel, Rhodes, Greece (Invited minisymposium talk).
- 75. SIAM Conference on Computational Science and Engineering, March 14–18, 2015, The Calvin L. Rampton Salt Palace Convention Center, Salt Lake City, Utah (Invited minisymposium talk).
- 76. ICNAAM 2015: International Conference of Numerical Analysis and Applied Mathematics, September 23–29, 2015, Rodos Palace Hotel, Rhodes, Greece (Invited).
- IWANASP 2015: Fifth International Workshop on Analysis and Numerical Approximation of Singular Problems, October 22-24, 20015, Lagos, Portugal (Invited).

Colloquium presentations at the University of Gdansk (Poland), University of Bratislava (Czechoslovakia), Iowa State University, Auburn University, University of Arkansas, University of Iowa, Virginia Polytechnic Institute & State University, University of Missouri–Rolla, University of Trieste, University of Florence, University of Rome, University of Naples (Italy), University of Kansas, University of Minnesota–Duluth, Arizona State University, University of Texas–San Antonio, Oakland University, University of Udine, University of L'Aquila, University of Bari (Italy), Trinity University, San Antonio, University of Warsaw (Poland), University of Cluj–Napoca (Romania), Boise State University, University of Tübingen (Germany), Susquehanna University, Lewisburg, Pennsylvania, University of Salerno (Italy), Istituto per le Applicazioni del Calcolo "Mauro Picone", Naples (Italy), AGH University of Science and Technology, Kraków (Poland), and Jagiellonian University, Kraków (Poland).

#### **GRANT SUPPORT**

- 1. Arkansas EPSCOR grant NSF PRM-8011447, July-August 1982 and July-August 1983, \$6000
- 2. National Science Foundation: "Studies in Numerical Solution of Functional Differential Equations", NSF DMS-841013, June 1984–November 1986, \$23000
- 3. Arkansas Science and Technology Authority: "The Numerical Solution of Neutral Functional

Differential Equations", ASTA 86-B-0072, May 1986–May 1987, \$16267

- 4. National Science Foundation: "Studies in Numerical Solution of Functional Differential Equations", NSF DMS-8520900, June 1986–November 1988, \$34300
- 5. National Science Foundation: "Studies in Numerical Solution of Functional Differential equations, NSF DMS-8900411, May 1989–November 1991, \$64000
- 6. National Science Foundation: "Studies in Numerical solution of Functional Differential equations, NSF DMS-9208048, August 1992–January 1996, \$130,400
- National Science Foundation: "Waveform Relaxation Methods," NSF INT- 9301044, June 15, 1994–May 31, 1996, \$13,550. U.S.–Italy Cooperative Research.
- National Science Foundation: "Studies in Numerical Solution of Ordinary Differential Equations", NSF DMS-9971164, August 1999–July 2003, \$105000
- National Science Foundation: "High Order Reconstruction Using Spectral Methods", NSF DMS-0510813, June 2005–May 2008, \$226547, Co-PI with A. Gelb, PI, H. Mittelmann, Co-PI, and B. Welfert, Co-PI.
- National Science Foundation: "Construction and Implementation of Efficient Numerical Methods for Ordinary Differential Equations", NSF DMS-0509597, July 2005 – June 2008, \$91000.
- National Science Foundation: "CSUMS: Undergraduate Research Experiences for Computational Math Sciences Majors at ASU", NSF DMS-07047294, Sep. 2007–August 2014, Co-PI with D. Armbruster, A. Gelb, D. Jones, E. Kostelich, J. Lopez, A. Mahalov, R. Renaut, C. Ringhofer and B. Welfert.
- Department of Education: "GAANN: Recruitment and Support of Highly Qualified American Students in Mathematics Doctoral Programs at ASU", August 2012–August 2015, Co-PI with F. Milner.

#### OTHER AWARDS

- 1. Spring 1980. Visiting Research Mathematician, International Banach Center, Warszawa, Poland (Semester on Computational Mathematics).
- 2. Fall, 1985. Full-time research assignment from University of Arkansas. Spent at the Department of Mathematics, VPI & SU, Blacksburg, VA.
- 3. June, 1986. Visiting appointment at the University of Trieste, Italy. Supported by Consiglio Nazionale delle Ricerche.
- 4. June, 1987. Visiting appointment at the University of Trieste, Italy. Supported by Consiglio Nazionale delle Ricerche.
- 5. June, 1988. Visiting appointment at the Institute for Mathematics Applications, Naples, Italy. Supported by Consiglio Nazionale delle Ricerche.
- 6. Summer, 1989. Research Award. College of Liberal Arts and Sciences, Arizona State University.
- 7. Support for the International Conference on the Numerical Solution of Volterra and Delay Equations, May 25–28, 1990, Arizona State University, \$13,000, National Science Foundation.
- 8. July, 1990. Visiting appointment at the University of Trieste, Italy. Supported by Consiglio Nazionale delle Ricerche.

- 9. July 1993. Visiting appointment at the University of Trieste, Italy. Supported by Consiglio Nazionale delle Ricerche.
- 10. May 1995. Visiting appointment at the University of Gdansk, Poland. Supported by the University of Gdansk and Polish Mathematical Society.
- 11. June 1995, Travel Grant to attend Workshop ODE to NODE, Geiranger, Norway, College of Liberal Arts and Sciences, Arizona State University.
- 12. July 1995. Visiting appointment at the University of Udine, Italy. Supported by Consiglio Nazionale delle Ricerche.
- Support for Volterra Centennial, The Second International Conference on the Numerical Solution of Volterra and Delay Equations, May 27-30, 1996, \$10,000, National Science Foundation.
- 14. May 1997. Visiting appointment at the University of Udine, Italy. Supported by Consiglio Nazionale delle Ricerche.
- 15. July, 1997. Research visit to the Norwegian University of Science and Technology, Trondheim, Norway. Supported by NTNU.
- 16. Support for NODEM 1998, Workshop on the Numerical Solution of Ordinary Differential Equations on Manifolds, April 2–3, 1998, \$7500, Arizona State University.
- 17. July, 1998. Research visit to the University of Auckland, New Zealand. International Travel Grant, College of Liberal Arts and Sciences, Arizona State University.
- 18. August, 1999. Research visit to the University of Auckland, New Zealand. International Travel Grant, College of Liberal Arts and Sciences, Arizona State University.
- 19. February, 2002. Research visit to the University of Auckland, New Zealand. Supported by Auckland Mathematics and Computation.
- 20. May, 2002. Research visit to the University of Gdansk, Poland. Partially supported by the University of Gdansk, Poland.
- 21. March, 2003. Research visit to the University of Auckland, New Zealand. Supported by Auckland Mathematics and Computation.
- 22. January, 2004. Research visit to the University of Auckland, New Zealand. Supported by Marsden Fund of New Zealand.
- 23. Support for the Third International Conference on the Numerical Solution of Volterra and Delay Equations, May 18–21, 2004, Arizona State University, \$14,000, National Science Foundation.
- 24. June 2004. Visiting appointment at the University of Trieste, Italy. Supported by Consiglio Nazionale delle Ricerche.
- 25. December 2005. Research visit to the University of Auckland, New Zealand. Supported by Auckland Mathematics and Computation.
- 26. May 2007. Research visit to the University of Salerno and University of Naples, Italy. Supported by University of Salerno, University of Naples, and Consiglio Nazionale delle Ricerche.
- 27. May 2008. Research visit to the AGH University of Science and Technology, Kraków, Poland. Supported by AGH University of Science and Technology.
- 28. December 2008. Research visit to the AGH University of Science and Technology, Kraków, Poland. Supported by AGH University of Science and Technology.

- 29. May 2009. Research visit to the University of Salerno and University of Naples, Italy. Supported by University of Salerno, University of Naples, and Consiglio Nazionale delle Ricerche.
- 30. December 2009. Research visit to the AGH University of Science and Technology, Kraków, Poland. Supported by AGH University of Science and Technology.
- 31. December 2010. Research visit to the AGH University of Science and Technology, Kraków, Poland. Supported by AGH University of Science and Technology.
- 32. December 2011. Research visit to the AGH University of Science and Technology, Kraków, Poland. Supported by AGH University of Science and Technology.
- 33. December 2012. Research visit to the AGH University of Science and Technology, Kraków, Poland. Supported by AGH University of Science and Technology.
- 34. December 2013. Research visit to the AGH University of Science and Technology, Kraków, Poland. Supported by AGH University of Science and Technology.
- 35. December 2014. Research visit to the AGH University of Science and Technology, Kraków, Poland. Supported by AGH University of Science and Technology.
- December 2015. Research visit to the AGH University of Science and Technology, Kraków, Poland. Supported by AGH University of Science and Technology.

#### Ph.D. STUDENTS

- 1. Edisanter Lo, Numerical Solution of Neutral Functional Differential Equations, Arizona State University, May 1993.
- 2. Stefania Tracogna, A General Class of Two-Step Runge-Kutta Methods for Ordinary Differential Equations, June 1996.
- 3. Jack Van Wieren, Using Diagonally Implicit Multistage Integration Methods for Solving Ordinary Differential Equations, July 1997.
- 4. Mahbubur Rahman, Numerical Approximations of Stochastic Differential Equations with Applications to Mathematical Neurosciences, December 2004 (co-advisor with Professor B. Welfert).
- 5. Muhammad Dur-e-Ahmad, Structural Plasticity of Dendritic Spines: A Computational Study, November 2007 (co-advisor with Professor S. Crook).
- 6. Russel W. Park, Optimal Compression and Numerical Stability for Gegenbauer Reconstruction with Applications, April 2009.
- 7. Raffaele D'Ambrosio, Highly Stable Multistage Numerical Methods for Functional Equations: Theory and Implementation Issues, March 2010 (co-advisor with Professor B. Paternoster).
- 8. Michał Braś, Effective general linear methods for ordinary differential equations, December 2014.

#### PUBLICATIONS

#### Book:

1. General Linear Methods for Ordinary Differential Equations, John Wiley, Hoboken, New Jersey 2009.

#### **Research** papers:

- 1. On the convergence of multistep methods for the Cauchy problem for ordinary differential equations (with M. Kwapisz), *Computing* **20** (1978), 351–361.
- Convergence of multistep methods for Volterra functional differential equations, Numer. Math. 32 (1979), 307–332.
- 3. On numerical integration of implicit ordinary differential equations (with M. Kwapisz), Appl. Math. 26 (1981), 97–110.
- 4. One step methods for the numerical solution of Volterra functional differential equations of neutral type, *Applicable Anal.* **12** (1981), 1–11.
- The numerical solution of Volterra functional differential equations of neutral type, SIAM J. Numer. Anal. 18 (1981), 615–626.
- 6. Adams methods for neutral functional differential equations, Numer. Math. 39 (1982), 221–230.
- The numerical solution of Volterra integro-functional equations (with M. Kwapisz), In: Functional-Differential Systems and Related Topics II, Proceedings of the Second International Conference (M. Kisielewicz, ed.), Blazejewko, Poland, May 3–10, 1981, pp. 141–146, Technical University of Zielona Gora, Zielona Gora 1982.
- Some remarks on convergence of multistep methods for approximate solution of functional differential equations (with M. Kwapisz). In: *Differential Equations and Applications, Proceedings of the Second Conference*, Rousse, Bulgaria, June 29–July 4, 1981, pp. 865–883, Technical University–Rousse, Center of Mathematics, Rousse 1982.
- Predictor-corrector methods for the numerical solution of neutral functional-differential equations. In: *Proceedings of the Conference "Numerical Analysis of Parametrized Nonlinear Equations*" (J. F. Porter, ed.), March 24–26, 1983, pp. 14–23, University of Arkansas, Fayetteville 1983.
- Global error estimation in the numerical solution of retarded differential equations by Euler's method, Appl. Math. 28 (1983), 177–185.
- 11. Convergence of multistep methods for Volterra integro-differential equations (with M. Kwapisz), Ann. Polon. Math. 43 (1983), 177–185.
- 12. Asymptotic stability analysis of  $\theta$ -methods for functional differential equations, Numer. Math. 43 (1984), 389–396.
- One step methods of any order for neutral functional differential equations, SIAM J. Numer. Anal. 21 (1984), 486–511.
- Stability analysis of numerical methods for Volterra integral equations of the second kind (with V. Bakke). In: *Proceedings of the Conference "Estimation and Control of Distributed Systems"* (Z. Jackiewicz, ed.), Fayetteville, Arkansas, April 12–14, 1984, pp. 1–17, University of Arkansas, Fayetteville 1984.
- 15. Global error estimation in the numerical solution of integro-differential equations by Euler's method, Zastos. Mat. 18 (1984), 487–501.
- 16. A note on the stability of  $\theta$ -methods for Volterra integral equations of the second kind (with M. Kwapisz), *Czechoslovak Math. J.* **34** (1984), 349–354.
- 17. Stability analysis of reducible quadrature methods for Volterra integral equations of the second

kind (with V. Bakke), Numer. Math. 47 (1985), 159–173.

- Stability analysis of reducible quadrature methods for Volterra integral equations of the first kind (with V. Bakke), J. Integral Equations 9 (1985), 243–249.
- 19. Quasilinear multistep methods and variable step predictor-corrector methods for neutral functional differential equations, SIAM J. Numer. Anal. 23 (1986), 423–452.
- Stability analysis of linear multistep methods for delay differential equations (with V. Bakke), Internat. J. Math. Math. Sci. 9 (1986), 447–458.
- 21. Stability analysis of product  $\theta$ -methods for Abel integral equations of the second kind (with V. Bakke), Numer. Math. 48 (1986), 127–136.
- Boundedness of solutions of difference equations and application to numerical solution of Volterra integral equations of the second kind (with V. Bakke), J. Math. Anal., Appl. 115 (1986), 592–605.
- 23. The numerical integration of Volterra integro-differential equations (with V. Bakke), *Rev. Roumaine Math. Pures Appl.* **31** (1986), 275–282.
- 24. Existence and uniqueness of solutions of neutral delay differential equations with state dependent delays, *Funkcial. Ekvac.* **30** (1987), 9–17.
- 25. Stability analysis of reducible quadrature methods for Volterra integro- differential equations (with V. Bakke), Appl. Math. **32** (1987), 37–48.
- Stability analysis of modified multilag methods for Volterra integral equations, IMA J. Numer. Anal. 7 (1987), 473–484.
- The numerical solution of Volterra integro-functional equations (with M. Kwapisz), Zastos. Mat. 19 (1987), 341–357.
- 28. Variable step variable order algorithm for the numerical solution of functional-differential equations, *Appl. Numer. Math.* **3** (1987), 317–329.
- 29. Stability of numerical methods for Volterra integro-differential equations of convolution type (with V. Bakke), Z. Angew. Math. Mech. 68 (1988), 89–100.
- Stability analysis of one-step methods for neutral delay-differential equations (with A. Bellen and M. Zennaro), Numer. Math. 52 (1988), 605–619.
- 31. Fully implicit one-step methods for neutral functional-differential equations, *Proc. of 27th IEEE Conf. of Dec. and Control* (1988), pp. 813–816 (Invited paper).
- Stability analysis of Volterra integro-differential equation (with M. Klaus and C. O'Cinneide), J. Integral Equations Appl. 1 (1988), 501–516.
- Natural continuous extensions of Runge-Kutta methods for Volterra integral equations of the second kind and their applications (with A. Bellen, R. Vermiglio and M. Zennaro), *Math. Comp.* 52 (1989), 49–63.
- 34. The numerical solution of boundary-value problems for differential equations with state depending deviating arguments (with V. Bakke), *Appl. Math.* **34** (1989), 1–17
- 35. Global stability condition for collocation methods for Volterra integral equations of the second kind (with M. R. Crisci, E. Russo and A. Vecchio), J. Integral Equations Appl. 2 (1989), 49–58.
- One-step methods for neutral delay-differential equations with state dependent delays, Zastos. Mat. 20 (1990), 445–463.

- Stability analysis of Runge-Kutta methods for Volterra integral equations of the second kind (with A. Bellen, M. Zennaro and R. Vermiglio), *IMA J. Numer. Anal.* 10 (1990), 103–118.
- Unstable neutral functional-differential equations (with A. Feldstein), Canad. Math. Bull. 33 (1990), 428–433.
- Global stability analysis of the Runge-Kutta methods for Volterra integral and integro-differential equations with degenerate kernels (with M.R. Crisci, E. Russo and A. Vecchio), Computing 45 (1990), 291–300.
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