March 3, 2012

VITA

ANTON ZETTL
Distinguished Research Professor of Mathematical Sciences, Emeritus

EDUCATION

Ph.D.	1964	University of Tennessee, Knoxville, TN
M.A.	1962	University of Tennessee, Knoxville, TN
B.S.	1959	Illinois Institute of Technology, Chicago, IL

Languages: Fluent in English and German.

AREAS OF SPECIALIZATION:

Ordinary Differential Equations and Operators
Norm Inequalities for Derivatives and Differences
Numerical Computation of Eigenvalues of Sturm-Liouville Problems

PROFESSIONAL EXPERIENCE:

Northern Illinois University, DeKalb, IL	Distinguished Research Prof., Emeritus	2000 -
Incarnate Word Acad. Corpus Christi, TX	AP Calculus Teacher	2008
Harvard University, Cambridge, MA	Visiting Professor	2004
Duisburg University, Duisburg, Germany	Visiting Professor	2002
Northern Illinois University, DeKalb, IL	Distinguished Research Professor	1999 - 2000
Northern Illinois University, DeKalb, IL	Presidential Research Professor	1995-99
Northern Illinois University, DeKalb, IL	Professor	1972-
Northern Illinois University, DeKalb, IL	Chair, Math Sc Dept	1983-86
Northern Illinois University, DeKalb, IL	Associate Professor	1969-72
Louisiana State University, Baton Rouge, LA	Associate Professor	1968-69
M.R.C., University of Wisconsin, Madison, WI	Visiting Associate Professor	1967-68
Louisiana State University, Baton Rouge, LA	Assistant Professor	1964-67

Positions held while on leave:

University of Essen, West Germany	Visiting Research Professor	1989
University of Birmingham, England	Visiting Research Professor	1988
Argonne National Laboratory, Argonne, IL	Visiting Research Scientist, Math & Comp. Sc Div	1986-87
Argonne National Laboratory, Argonne, IL	Special Term Appointee (Consultant)	1983-88
Argonne National Laboratory, Argonne,IL	Visiting Research Scientist Applied Mathematics Div.	1974-75
University of Dundee, U.K.	Visiting Research Mathematician	1974-75
MRC. University of Wisconsin, Madison, WI	Visiting Associate Professor	1967-68

Memberships in Professional Organizations

American Mathematical Society

Mathematical Association of America

Society for Industrial and Applied Mathematics

GRANTS AND AWARDS:

Oak Ridge National Laboratory, Fellowship to do research for a dissertation on Boundary Value Problems and Harmonic Matrices, 1963-1964.

NASA Grants

NGR-19-001-011 (6/1/65 to 5/31/66) "The lack of self-adjointness in three point boundary value problem."

NGR-19-001-018 (7/1/66 to 6/30/67) continuation of 1.

NGR-19-001-018 Supplement 1 (7/1/67 to 6/30/68) "Symmetry in non self-adjoint boundary problem."

NSF Grants

GP-44012 (74-75) "Powers and factors of ordinary linear differential operators."

MCS 76-06623 (76-77) "The deficiency index problem for singular ordinary differential operators and powers."

MS 44-22079 (91-94) "On the numerical computation of the spectrum of singular Sturm-Liouville problems". (Applied/Computational Mathematics).

DMS 9973108 (98-03) "A Qualitative and Quantitative Study of Self-Adjoint and Non-Selfadjoint Sturm-Liouville Problems"

SRC Grant (British Science Research Council)

1974-75 (while visiting the University of Dundee, Scotland)

SRC (British Science and Engineering Research Council)

1982. To attend a symposium at the University of Dundee during the period April 1, 1982 until July 1, 1982.

1985. To do research with Professor W. N. Everitt at the University of Birmingham, England, July-September.

1988. To do research at the University of Birmingham with W. N. Everitt and Paul Bailey (of Sandia National Laboratory)

Argonne National Laboratory

1981-82 (Faculty Research Leave at Argonne FRLA support)

1983-84 Argonne Laboratory Special Term Employee (Consultant)

1985-86 Argonne Laboratory Special Term Employee (Consultant)

1986-87 FRLA Support of NIU Faculty Development Program

1987-88 Argonne Laboratory Special Term Employee (Consultant)

Deutsche Forschungsgemeinschaft

1989 DFG, Gastprofessor, University of Essen, West Germany

Educational Advancement Foundation

2004 Support for living expenses in Cambridge, MA, while teaching at Harvard Univ.

PUBLISHED INVITED LECTURES GIVEN AT INTERNATIONAL CONFERENCES AND SYMPOSIA :

"Computing continuous spectrum", Proceedings of International Symposium, "Trends and developements in ordinary differential equations", edited by Y.Alavi and P.-F. Hsieh, World Scientific, (1994), 393-406.

"Norm inequalities for the differential and difference operators," (with M. K. Kwong). Lecture given at Conference celebrating the 50th anniversary of the publication of the book 'Inequalities' by Hardy, Littlewood and Polya. Birmingham, England, July, 1987. Inequalities, Marcel Dekker, New York, (1991), 91-123.

"The Legendre equation on the whole line," Differential and Integral Equations, Proc. of International Conference, Columbus, Ohio, 1988.

"Norm inequalities for the difference operator", (with M. K. Kwong), General Inequalities V(1986), Birkhauser. Lecture given at General Inequalities Conference V 1986 at Oberwolfach, West Germany.

"Problems on norm inequalities for differences", (with M. K. Kwong) General Inequalities V (1986), Birkhauser, (we were asked to publish a list of open problems on norm inequalities for differences.)

"Linear transport theory and an indefinite Sturm-Louiville problem", (with H. Kaper) Lecture Notes in Mathematics, Springer-Verlag, (1982), Lecture given at 1982 Conference on Differential Equations in Dundee, Scotland.

"A new approach to second order linear oscillation theory", (with M. K. Kwong), Lecture Notes in Mathematics, Springer-Verlag, (1982). Lecture given at 1982 Symposium on Differential Equations in Dundee, Scotland.

"On the spectrum of nonselfadjoint differential operators"; (with W. D. Evans and R. L. Lewis) Lecture Notes in Mathematics, Springer-Verlag, (1982). Lecture given at Midwest Conference on Ordinary Differential Equations, Iowa City, Iowa.

"Norm inequalities for derivatives", (with M. K. Kwong), Lecture Notes in Mathematics, Springer-Verlag, V. 846 (1980), 227-243. Lecture given at 1980 Conference on Differential Equations, University of Dundee, Scotland.

"Remarks on Landau's inequality", (with M. K. Kwong) Lecture Notes in Mathematics Springer Verlag. Proceedings of the 1978 Dundee Conference of Differential Equations.

"Limit point conditions for powers", Lecture Notes in Math. Springer-Verlag (1976), V. 564, 540-550.

"Addendum to limit point conditions for powers", (with W. D. Evans), Lecture notes in Mathematics, Springer-Verlag (1976), V. 564, 550-551

"Deficiency indices of polynomials in symmetric differential expressions", Springer-Verlag in Lecture Notes in Mathematics, No. 415(1974).

BARRETT LECTURES 1996

"Sturm-Liouville Problems", spectral theory and computational methods of Sturm-Liouville problems, Marcel Dekker, v. 191, 1997, 1-104. Proceedings of the 1996 Knoxville Barrett Conference, edited by D. Hinton and P. Schaeffer. (As the "Barrett" lecturer I gave the three featured plenary lectures for this conference; this paper was based on these. Previous "Barrett" lecturers: LaSalle (founding editor of JDE), Hale (current editor of JDE), Everitt).

OTHER INVITED LECTURES

2010

"Self-Adjoint Ordinary Differential Operators and Their Spectra", Mathematics Institute, Chinese National Academy of Sciences, Beijing.

"Sturm-Liouville and Matrix eigenvalue Problems", Mathematics Institute, Chinese National Academy of Sciences, Beijing.

"Self-Adjoint Ordinary Differential Operators and Their Spectra", Plenary Lecture, Conference on Spectral Theory, University of Inner Mongolia, Hohhot, China.

"Personal Observations on the American System of Education" Mathematics Department, University of Inner Mongolia, Hohhot, China.

2009

"Self-Adjoint Ordinary Differential Operators", Mathematics Department Colloquium Lecture, Baylor University, Waco, Texas.

2006

"Eigenvalues of Sturm-Liouville Problems When the Domain Shrinks to a Point", PanAmerican University, Edinburg, Texas, Colloquium Lecture

in the Distinguished Lecture Series.

2005

"Research and Teaching, A Personal Perspective", Plenary Lecture at the annual meeting of the 'Educational Advancement Foundation', Austin,

Texas, April, 2005.

"Eigenvalues of Sturm-Liouville Problems When the Domain Shrinks to a Point", Regional AMS meeting, Lincoln Nebraska, Oct 2005.

"Eigenvalues of Sturm-Liouville Problems When the Domain Shrinks to a Point", Millan Colloquium Lecture, University of North Texas, Denton,

Dec. 2005.

"Eigenvalues of Sturm-Liouville Problems When the Domain Shrinks to a Point", Colloquium Lecture, University of Missouri, Rolla, Dec. 2005.

2002

"The SLEIGN2 Sturm-Liouville code", colloquium lecture, Duisburg University, Germany, June 2002.

"Left-Definite Sturm-Liouville problems", Spectral Theory Conference, Gregynog, Wales, U.K., July 2002.

"Regular Left-Definite Sturm-Liouville Problems", Conference in honor of Allan Krall, Knoxville, TN October 2002.

"Singular Left-Definite Sturm-Liouville Problems", SEACR Conference in honor of Don Hinton, Knoxville, TN October 2002.

2001

"The SLEIGN2 Sturm-Liouville code", colloquium lecture, Western Illinois University, Macomb.

"The SLEIGN2 Sturm-Liouville code", colloquium lecture, University of Missouri-Columbia.

"The SLEIGN2 Sturm-Liouville code", colloquium lecture, Texas A and M University-Kingsville.

2000

"Sturm-Liouville problems with finite spectrum", Regional AMS meeting University of Alabama-Birmingham.

1993

“Spectral Computations for Sturm-Liouville problems”, South Texas Mathematics Symposium, Texas A and M University, Kingsville, Texas,

March 1998.

“Computing the continuous spectrum of singular Sturm-Liouville problems", International Conference on Scientific Computation and Differential

Equations, University of Auckland, New Zealand, Jan. 1993.

“Computing the spectrum of Hill’s equation", Regional meeting of the AMS(American Mathematical Society), Univ. of Tennessee, Knoxville,

March, 93.

“Numerical computation of the spectrum of singular Sturm-Liouville problems, Workshop on computational techniques in spectral theory and

related topics, University of Wales, Gregynog, July, 1993.

1992

“Computing eigenvalues of Sturm-Liouville problems", Colloquium lecture, University of North Texas, Denton, Oct. 92.

1991

“Differential operators with an infinite number of interior singularities", Colloquium lecture, University of Dortmund, Germany.

“Differential operators with an infinite number of interior singularities", Mathematics Research Institute Oberwolfach, West Germany, January

1991.

“Numerical Computation of eigenvalues of singular Sturm-Liouville Problems", I.C.I.A.M.(International Conference on Industrial and Applied

Mathematics), Washington D.C., July 1991.

1990

“Computing eigenvalues of singular Sturm-Liouville problems", lecture given at University of Duisburg, Germany, December.

“Computing eigenvalues of Sturm-Liouville Problems", International Conference on Differential Equations, March 1990, University of Alabama,

Birmingham.

“The Legendre operator on the whole line", International Conference on, Boundary Value Problems for Ordinary Differential Equations, Ohio

University, Athens, Ohio, June 1990.

“Norm inequalities for matrices", Mathematics Research Institute, Oberwolfach, West Germany, December 1990.

1989

“Computing Eigenvalues of Sturm-Liouville Problems Numerically", Colloquium Lecture, Complutense University, Madrid, Spain, January 1989.

“How Large Can Derivatives Be?", Colloquium Lecture, Complutense University, Madrid, Spain, January 1989.

“A New Algorithm for the Numerical Computation of Eigenvalues of Singular Sturm-Liouville Problems", International Conference on Boundary

Value Problems and Spectral Theory, Math Research Institute, Oberwolfach, West Germany, April 1989.

“Die Landauische Ungleichung", Colloquium Lecture, University of Duisburg, West Germany, May 1989.

“Sturm-Liouville Problems with Interior Singularities", Colloquium Lecture, University of Regensburg, West Germany, June 1989.

“Die Landauische Ungleichung", Colloquium Lecture, University of Munich, West Germany, June 1989.

“Die Landauische Ungleichung", Colloquium Lecture, University of Frankfurt, West Germany, June 1989.

1988

“Some new results and open problems on 2 by 2 real matrices", Colloquium Lecture, University of Tennessee, Knoxville.

“Some new results and open problems on 2 by 2 real matrices", Colloquium Lecture, Northern Illinois University.

“On the numerical computation of the eigenvalues of Sturm-Liouville problems", Applications Involvement Component Lecture to Graduate

Students and Faculty, Northern Illinois University.

1987

“On the numerical computation of the eigenvalues of Sturm-Liouville problems with matrix coefficients", University of Alabama, Birmingham.

1986

“Best constants in Landau’s inequality for the difference operator", Mathematical Research Institute, Oberwolfach, West Germany.

“Comparison of best constants in Landau’s inequality for derivatives and differences", regional meeting of the AMS, Denton, Texas.

1983

“Spectral theory for nonselfadjoint operators", Conference on Boundary Value Problems at Oberwolfach, West Germany.

“How large can a function and its derivatives be?", Colloquium lecture at University of Essen, Duisburg and Dortmund, West Germany.

1982

“The essential spectrum of closed operators", International Conference on Differential Equations, Utah State University, Logan Utah.

1981

“Landau’s inequality", Colloquium lecture, University of Iowa, Iowa City.

1980

“Which differential expressions commute?", Midwest D. E. Conference, University of Illinois, Urbana.

1979

“On Kolmogorov’s inequality", Colloquium Lecture at Mathematics Research Center, University of Wisconsin-Madison.

1977

“The deficiency index problem for differential operators", Colloquium lecture, Penn. State University, Pennsylvania.

1976

“Norm inequalities for m-dissipative operators", Colloquium Lecture North Texas State University, Denton

“Limit point conditions for differential operators", Colloquium lecture, University of New Mexico, Albuquerque.

1975

“Characterization of all disconjugate operators", Strathclyde U. Glasgow.

“The deficiency index problem for powers of differential operators", Colloquium lecture, Sussex University.

“Limit point conditions for higher order differential operators", University of Wales in Cardiff.

“The deficiency index problem for powers of differential operators", Colloquium lecture, University of Louvain-la-Neuve, Belgium.

“The deficiency index problem for differential operators", Colloquium Lecture, Royal Institute of Technology, Stockholm.

“Commuting differential expressions", University of Linkoeping, Sweden

“The deficiency index problem for powers of differential operators", Colloquium lecture, Oxford University, England.

“The deficiency index problem for powers", Colloquium Lecture, University of Gothenburg, Sweden.

“Commuting differential expressions", Colloquium lecture, University of Uppsala, Sweden.

“The deficiency index problem for powers of differential operators", Colloquium lecture, Chelsea College, University of London.

1974

“Limit point conditions for differential operators", Invited plenary lecture at International Conference on Differential Equations, University of

Dundee.

1973

“Limit point conditions for powers of differential operators", Colloquium Colloquium Lecture, University of Texas, Houston.

1968

“Selfadjointness in nonselfadjoint boundary value problems", Mathematics Research Center, University of Wisconsin-Madison.

“Selfadjoint boundary value problems with interface conditions", Colloquium Lecture, University of Houston, Texas.

OTHER PROFESSIONAL INFORMATION

Referee for over 20 journals and NSF, Canadian Research Council, U.S. Army, etc.

Reviewer for Mathematical Reviews.

National Research Council. Invited to join panel to evaluate programs for NRC,the National Research Council of the National Academy of Sciences.

Monographs:

“Sturm-Liouville Theory”, Surveys and Monographs 121, American Mathematical Society, 2005, 1-328.

(with R. M. Kauffman and T. T. Read), “The deficiency index problem for powers of ordinary differential expressions", Lecture Notes in Mathematics 621, Springer-Verlag, 1977, 1-127.

(with M.K. Kwong), "Norm inequalities for derivatives and differences", Lecture Notes in Mathematics 1536, Springer-Verlag, (1993), 1-150.

Reports

(with W. Eberhard and G. Freiling), "Sturm-Liouville Problems with Singular Non-Selfadjoint Boundary Conditions", Schriftenreihe des Instituts fuer Mathematik, Gerhard Mercator Universitaet Duisburg, (2003), SM-DU-547.

(with W.N. Everitt, C. Shubin, G. Stolz) "Sturm-Liouville problems with an infinite number of interior singularities", Report (Preprint) 96/16, School of Mathematics and Statistics, University of Birmingham, U.K.

(with H. G. Kaper and M. K. Kwong) Proceedings of the focused research program on spectral theory and boundary value problems, Argonne Reports ANL-87-26, vol 1, vol 2, vol 3 and vol 4. (Edited by Kaper, Kwong and Zettl), 1988 and 1989.

(with M. K. Kwong), "Norm inequalities for derivatives", Lecture Notes in Mathematics, v. 841, Springer Verlag, New York (1988), 225-243.

(with M. K. Kwong), "Norm inequalities for the powers of a matrix", Argonne National laboratory report MCS-P9-0988.

(with M. K. Kwong), "Determining the best constant for the 2×2 matrix Landau inequality using MAPLE", Argonne National Laboratory Report MCS-P-7-0988.

"The essential spectrum of nonselfadjoint ordinary differential operators", University of Missouri at Rolla Press; edited by J. L. Henderson (1985), 152-168. Proceedings of the Twelfth and Thirteenth Midwest Conference.

(with F. V. Atkinson, A. M. Krall, G. Leaf), "On the numerical computation of eigenvalues of Sturm-Liouville problems with matrix coefficients", Argonne Report (1989).

(with Kaper, Kwong and Lekkerkerker), "Full and half-range theory of indefinite Sturm-Liouville Problems", ANL-83-76, Argonne National Laboratory Report 1983.

"Commentary on [103]". This is an invited commentary on work of the Mathematician Landau for "Edmund Landau. Collected Works" .

(with W.N. Everitt) "Differential operators generated by a countable number of Quasi-Differential expressions on the real line", Report of the University of Birmingham, England, (1990).

(with P.B. Bailey and W.N. Everitt), "Computing eigenvalues of singular Sturm-Liouville Problems", Report of the University of Birmingham, England, 1991.

Book Reviews

For Bulletin of AMS: "Global properties of ordinary linear differential equations", by Frantisek Neuman, v.29, no.2, October 1993, 293-298.

For 'Math. Reviews: "Sturm-Liouville Theory: Past and Present", 2005.

DIRECTION OF THESES AND DISSERTATIONS :

"Compact inverses of differential operators", Robert Kauffman, LSU, (1968).

"Absolute stability of nonlinear differential equations", Rongdong Wang, NIU, (1991).

"Eigenvalues of Matrix Sturm-Liouville problems with separated or coupled boundary conditions", Howard I. Dwyer, NIU, (1993).

JOURNAL EDITORSHIP :

Member of editorial board, PanAmerican J. of Mathematics, 1999-.

Consulting Editor, Proceedings Royal Society of Edinburgh, 1972-1987.

Member of editorial board, Journal of Inequalities and Applications, 1996-.

PUBLICATIONS (in refereed research journals)

1965

"Adjoint linear differential operators", Proc. Amer. Math. Soc., 16(1965), 1239-1241.

1966

(with E. A. Coddington), "Hermitian and anti-Hermitian properties of Green's matrices", Pac. J. Math., 18(1966), 451-454.

"The lack of self-adjointness in three point boundary value problems", Proc. Amer. Math. Soc., 17(1966), 368-371.

1967

"Some identities related to Polya's property W for linear differential equations", Proc. Amer. Math. Soc., 18(1967), 992-994.

1968

"Adjoint and self-adjoint boundary value problems with interface conditions", SIAM J. Appl. Math., 16(1968), 851-859.

1969

"A note on square integrable solutions of linear differential equations", Proc. Amer. Math. Soc., 21(1969), 671-672.

"Adjointness in non-adjoint boundary value problems", SIAM J. Appl. Math., 17(1969), 1268-1279.

1970

"Square integrable solutions of $Ly = f(t, y)$", Proc. Amer. Math. Soc., (1970), 635-639.

1971

"Factorization of differential operators", Proc. Amer. Math. Soc., 27(1970), 425-426.

1972

"Factorization and disconjugacy of third order differential equations", Proc. Amer. Math. Soc., 31(1972), 203-208.

1973

"Explicit conditions for the factorization of nth order linear differential operators", Proc. Amer. Math. Soc., 41, No. 1, (1973), 137-145.

(with J. S. W. Wong), "On the limit point classification of second order differential equations", Mathematische Zeitschrift, (1973), 297-304.

1974

"General theory of the factorization of nth order linear differential operators", Transactions American Math. Soc., V. 197 (1974), 341-353.

"A characterization of the factors of ordinary linear differential operators", Bulletin Amer. Math. Soc., V. 80, No. 3 (1974), 498-500.

1975

"Formally self-adjoint quasi-differential operators", Rocky Mountain Journal of Math., V. 5 (1975), 453-474.

"The limit point and limit circle cases for polynomials in a differential operator", Proc. Royal Society of Edinburgh, (1975), 219-224.

"A constructive characterization of disconjugacy", Bull. Amer. Math. Soc., Vol 81, No. 1 (1975).

"Perturbation of the limit circle case", Quart. J. Math. Oxford, (1975).

"Deficiency indices of polynomials in symmetric differential expressions II", Proc. Royal Soc. Edinburgh, 73A, 20(1974/75).

1976

"Perturbation theory of deficiency indices of differential operators", J. London Math. Soc., (2), 12(1976).

"Separation for differential expressions and the L^p spaces", Proc. Amer. Math. Soc., V. 55, 1, 1976.

"An algorithm for the construction of limit circle expressions", Proc. Royal Soc. Edinbrugh, 75A, 1, 1976.

"An algorithm for the construction of all disconjugate operators", Proc. Royal Society of Edinburgh, 75A, 4, 1976.

(with W. D. Evans), "On the deficiency indices of powers of real $2n$th order symmetric differential expressions", J. London Math. Soc. (2), 13(1976), 543-556.

"Powers of symmetric differential expressions without smoothness assumptions", Quaestiones Mathematicae, 1(1976), 83-94.

1977

(with W. N. Everitt), "The number of integrable-square solutions of products of differential expressions", Proc. Roy. Soc. Edinburgh, 76A, (1977), 215-226.

(with M. S. P. Eastham), "Second order differential expressions whose squares are limit-3", Proc. Roy. Soc. Edinburgh, 16(1977), 223-238.

(with W. D. Evans), "Interval limit-point criterial for differential expressions and their powers", J. London Math. Soc., 15 (1977), 119-133.

1978

(with W. D. Evans), "Dirichlet and separation results for Schrodinger type operators", Proc. Roy. Soc. Edinbrugh, 80A (1978), 151-162.

(with W. D. Evans), "Norm inequalities involving derivatives", Proc. Roy. Soc. Edinburgh, A. (1978), 51-70.

(with W. N. Everitt), "On a class of integral inequalities", J. London Math. Soc., 17(1978), 291-303.

(with W. N. Everitt), "Products of differential expressions without smoothness assumptions", Quaestiones Mathematicae, 3(1978), 67-82.

(with W. D. Evans), "Levinson's limit-point criterion and powers", J. Functional Analysis and Applications, V. 62 (1978), 629-639.

1979

(with M. K. Kwong), "Norm inequalities for dissipative operators on inner product spaces", Houston J. Math. V. 5(1979), 543-557.

(with M. K. Kwong), "An extension of the Hardy-Littlewood inequality", Proc. Amer. Math. Soc., 77(1979), 117-118.

(with W. N. Everitt), "Generalized symmetric ordinary differential expressions, I. The basic theory", Nieuw Archief. voor Wiskunde, (3), XXVII (1979), 363-397.

(with M. K. Kwong) "Remarks on best constants for norm inequalities among powers of an operator", J. Approx. Theory, 26(1979), 248-258.

1980

(with M. K. Kwong), "Ramifications of Landau's inequality", Proc. Roy. Soc. Edinburgh, 86A(1980), 175-212.

1981

(with M. Giertz and M. K. Kwong), "Commuting linear differential expressions", Proc. Roy. Soc. Edinburgh, 87A(1981), 331-347.

(with M. K. Kwong), "Weighted norm inequalities of the sum form involving derivatives", Proc. Roy. Soc. Edinburgh, 88A(1981), 121-134.

(with M. K. Kwong), "Norm inequalities of product form is weighted L^p spaces", Proc. Roy. Soc. Edinburgh, 89A(1981), 293-307.

(with M. K. Kwong), "Discreteness conditions for the spectrum of ordinary differential operators", J. Differential Equations, V. 40(1981), 53-70.

1982

(with M. K. Kwong), "Integral inequalities, and second order linear oscillation", J. Diff. Equations, 45(1982), 16-33.

1983

(with W. N. Everitt and M. K. Kwong), "Oscillation on eigenfunctions of weighted regular Sturm-Liouville problems", J. London Math. Soc., 27(183), 106-120.

(with W. D. Evans and M. K. Kwong), "Lower bounds for the spectrum of ordinary differential operators", J. of Diff. Equ., 48(1983), 123-155.

(with M. K. Kwong), "Asymptotically constant functions and second order linear oscillation", J. of Math. Anal. & Applications, 93(1983), 475-494.

(with J. Goldstein and M. K. Kwong), "Weighted Landau inequalities", J. Math. Anal. & Appl., 95(1983), 20-28.

(with Z. Franco, H. G. Kaper, M. K. Kwong), "Bounds for the best constants in Landau's inequality on the line", Proc. Roy. Soc. Edinburgh, 95A(1983), 257-262.

1984

(with W. N. Everitt and M. K. Kwong), "Differential operators and quadratic inequalities with a degenerate weight", J. Math. Anal. & Appl., 98(1984), 378-399.

(with H. G. Kaper and M. K. Kwong), "Regularizing transformations for certain singular Sturm-Liouville boundary value problems", SIAM J. Math. Anal., V. 15(1984), 957-963.

(with H. G. Kaper, M. K. Kwong and C. G. Lekkerkerker), "Full and partial-range eigenfunction expansions for Sturm-Liouville problems with indefinite weights", Proc. Roy. Soc. Edinburgh, 98A (1984), 69-88.

(with H. G. Kaper and M. K. Kwong), "Singular Sturm-Liouville problems with nonnegative and indefinite weights", Monatsheft fuer Mathematik, 97(1984), 177-189.

(with M. K. Kwong), "Landau's inequality", Proc. Roy. Soc. Edinburgh, 97A(1984), 161-163.

1985

"The essential spectrum of nonselfadjoint ordinary differential operators", Proceedings of the Twelfth and Thirteenth Midwest Conferences", edited by J.L. Henderson, University of Missouri-Rolla, 1985.

(with Z. M. Franco, H. G. Kaper and M. K. Kwong), "Best constants in norm inequalities for derivatives on a half-line", Proc. Roy. Soc. Edinburgh, 100A(1985), 67-84.

1986

(with W. N. Everitt), "Sturm-Liouville differential operators in direct sum spaces", Rocky Mountain J. of Mathematics, (1986), 497-516.

(with H. G. Kaper and M. K. Kwong), "Characterization of the Friedrichs extensions of singular Sturm-Liouville expressions", SIAM J. Math. Anal., 7(1986), 772-777.

1987

(with M. K. Kwong), "Extremals in Landau's inequality for the difference operator", Proc. Roy. Soc. Edinburgh, v. 107(1987), 299-311.

(with W. N. Everitt and J. Gunson), "Some comments on Sturm-Liouville eigenvalue problems with interior singularities", Zeitschrift fuer Angewandte Mathematik und Physik, v. 38 (1987), 813-838.

1988

(with F. V. Atkinson and W. N. Everitt), "Regularization of a Sturm-Liouville problem with an interior singularity using quasi-derivatives", Differential and Integral Equations, v. 1(1988), 213-221.

(with A. M. Krall), "Singular Sturm-Liouville problems II., Interior singular points", SIAM J. Math. Anal, (1988), 1135-1141 .

(with M. K. Kwong), "Landau's inequality for the difference operator", Proc. Amer. Math. Soc., v. 104 (1988), 201-206.

(with A. M. Krall), "Singular self-adjoint Sturm-Liouville problems", Differential and Integral Equations, v. 1 (1988), 423-432.

1989

(with M.K. Kwong), "Best constants for discrete Kolmogorov inequalities", Houston J. Math., (1989), 99-119.

1990

(with H.D. Niessen), The Friedrichs extension of regular ordinary differential operators, *Proc. Roy. Soc. Edinburgh,* 114A(1990), 229-236.

(with D.Race), “On the commutativity of certain quasi-differential expressions", J. London Math. Society, v.42 (1990), 489-504.

1991

(with M.K. Kwong), “Norm inequalities for derivatives and differences”, Inequalities, Marcel Dekker, 91-123.

(with M.K. Kwong), “Norm inequalities for the powers of a matrix", American Math. Monthly, v.98, no.6 (1991), 533-538.

(with P.B. Bailey and W.N. Everitt), “Computing eigenvalues of singular Sturm-Liouville problems", Results in Mathematics v.20 (1991),391-423.

(with P.B. Bailey, B.S. Garbow and H.G. Kaper), “Eigenvalue and eigenfunction computations for Sturm-Liouville problems", ACM TOMS v.17(1991),491-499.

(with P.B. Bailey, B.S. Garbow and H.G. Kaper), “Algorithm 700, A FORTRAN software package for Sturm-Liouville problems", ACM Toms v.17 (1991),500-501.

1992

(with W.N. Everitt), “Differential operators generated by a countable number of quasi-differential expressions on the line", Proc. London Math. Soc.(3) v.64, (1992), 524-544.

(with H.D. Niessen), “Singular Sturm-Liouville problems: The Friedrichs extension and comparison of eigenvalues", Proc. London Math. Soc. 3 v.64 (1992), 545-578.

(with D.Race), “Characterization of the factors of quasi-differential expressions", Proc. Roy. Soc. Edinburgh 120A (1992), 297-312.

1993

(with H. Frentzen and D. Race), “On the commutativity of certain quasi- differential expressions II", Proc. Roy. Soc. Edinburgh, 123A, (1993), 27-43.

(with D.Race),“Nullspaces, representations and factorizations of quasi- differential expressions", J. Differential and Integral Equations v6, no4, (1993), 949-960.

(with P. B. Bailey, W. N. Everitt and J. Weidmann), “Regular approximations of singular Sturm-Liouville problems", Results in Mathematics,v.22,(1993), 3-22.

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