

Name Charles David Luning
Title Professor
Department Mathematics and Statistics
College College of Arts & Sciences, SHSU

Degrees Earned

Degree, Major, (minor – optional), Institution, Year

1963 – MS – Mathematics University of Colorado Boulder, Colorado

1965 – MS – Mathematics University of Colorado Boulder, Colorado

1971 – Ph.D. (Mathematics) Purdue University West Lafayette, Indiana

Dissertation: Topological Algebras for the Observables of Quantum Mechanical Systems
And Fields

Peer-Review Publications and Artistic Performances/Exhibitions

Articles

(Co-author) On the Density of the Breit-Wigner Functions, J. Math. Phys., vol. 16, No. 8, Aug. 1975.

(Co-author) Iterative Solutions of hartree's Equation, J. Math Phys., vol. 17, No. 7, July 1976.

(Co-author) An Iterative Technique for Solution of the Thomas-Fermi Equation Utilizing a nonlinear Eigenvalue Problem, Quarterly of Applied Mathematics, July 1977.

An Iterative Technique for Obtaining Solutions of a Thomas-Fermi Equation, SIAM J. Math. Anal., Vol. 9, No. 3, June 1978.

(Co-author) Positive Solutions of Superlinear Eigenvalue Problems via Monotone Iterative Techniques, J. of Diff. Eq., Vol. 33, Sept. 1979.

(Co-author) Implementation of an Iterative Technique for the Solution of Generalized Emden-Fowler Eigen Problems. Lecture notes in Computer Science No. 76, Springer-Verlay, 1979.

(Co-author) Implementation of New Iterative Techniques for Solutions of Thomas-Fermi and Emden-Fowler Equations, J. comp. Physics, Vol. 38, No. 3, Dec. 1980.

(Co-author) Convergence of Berryman's Iterative Method for Some Emden-Fowler Equations, J. Math. Physics, Vol. 22, No. 8, Aug. 1981.

(Co-author) Positive Solutions of Negative Exponent Generalized Emden-Fowler Boundary Value Problems, SIAM J., Math Anal., Vol. 12, No. 6, Nov. 1981.

(Co-author) An Iterative Method for a Solution of a Boundary Value Problem in nonNewtonian Fluid Flow, J. of Non Newton Fluid Mechanics, 15, 1984, 145-154.

(Co-author) Iterative Solution of a non-linear Boundary Value Problem for a Rotating String, Int. J. Non-Linear Mechanics, Vol. 19, No. 1, 1984.

(Co-author) Shape Functions in Cross-Field Diffusion Problems for Multi-Pole Plasmas, Math. Phys., 25187, Aug. 1984.

(Co-author) Constructive Existence of Solutions for Negative Exponent Generalized Emden-Fowler Nodal Problems. Trends on Theory and Practice of Non-linear Analysis, Elsevier, 1985.

(Co-author) Iterative Solution of Negative Exponent Emden-Fowler Problems. International Journal on Mathematics and Mathematical Sciences, Vol. 13, No. 1, 1990.

Peer-Review Presentations/Posters

1974 – A.M.S. Annual Meeting, San Francisco

1976 – Optional Control and O.D.E.'s, University of Oklahoma

1976 – A.M.S. Annual Meeting, San Antonio

1977 – A.M.S. Annual Meeting, St. Louis

1978 – Codes for B.V.P.'s in O.D.E.'s, Houston

1979 – A.M.S. Annual Summer Meeting, Vancouver

1981 – A.M.S. Annual Meeting, San Francisco

1982 – A.M.S. Annual Meeting, Cincinnati

1984 – A.M.S. Annual Meeting, Louisville

1984 – 6th Annual Conference on Trends on Theory and Practice of Non-linear Analysis, Arlington

1985 – International Conference on Theory and Applications of Differential Equations, Pan American University, Edinburg, Texas, (Joint work presented by W.L. Perry)

1986 – A.M.S. Annual Meeting, New Orleans

Honors and Awards

Tau Beta Pi

Sigma Tau

Sigma Pi Sigma

Pi Mu Epsilon