Résumé of John W. Wingate

Specialty areas

Control theory; game theory; linear, nonlinear, and network programming.
Computer programming for applied mathematics.
UNIX and Linux system administration.

Computer experience

Languages: Fortran, Pascal, C, UNIX shell scripts, HTML, and others. Over 35 years of programming experience.

System administration:
Administered for 8 years a heterogeneous UNIX network (Sun, Hewlett-Packard, Silicon Graphics, and Alliant systems). Currently involved in administering systems running Solaris and Linux.

Operating systems:
Familiar with UNIX (various flavors), Linux, NOS (CDC), VMS, MS-DOS.

Skills: Debugging and problem solving; program design and development.

Education

B.S. (Electrical Engineering) Michigan State University, 1964

M.S. (Electrical Engineering) Michigan State University, 1965

Ph.D. (Electrical Engineering) Michigan State University, 1968,
Thesis *On Optimal Fields for Differential Games*

Employment

1996–present
Research Scientist
Enig Associates, Inc.
Suite 340, Meadows Park III Bldg.
12501 Prosperity Drive
Silver Spring, MD 20904

1972–1996
Mathematician (GS-12, GM-13)
Information and System Sciences Branch (B44)
Naval Surface Warfare Center
10901 New Hampshire Avenue
Silver Spring, MD 20903
(Formerly the Naval Ordnance Laboratory)

1968–1972
Senior Engineer Scientist
Aero/Thermodynamics and Nuclear Effects Department
McDonnell-Douglas Astronautics Company, Western Division
5301 Bolsa Avenue
Huntington Beach, CA

Teaching

August 1969 (jointly with Theodore Guinn) University of California at Los Angeles: Optimal Control Theory and Applications (graduate level extension course).

Spring and Summer 1971
Department of Engineering, California State College at Los Angeles: Circuit Analysis (undergraduate level).

Spring 1975 (jointly with Kenneth D. Shere) Department of Operations Research, George Washington University: Integer and Discrete Programming (graduate level).

Spring 1984 Mathematics Department, University of Maryland at Baltimore County: Numerical Analysis (undergraduate level).

Publications

Book: (coeditor with A. K. Aziz and M. J. Balas) *Control Theory of Systems Governed by Partial Differential Equations,* Academic Press, New York, 1977.

Articles: A Saddle-Point Theorem for a Class of Infinite Games, *Naval Research Logistics Quarterly,* Vol. 21, No. 2 (1974) pp. 299–306.

(with K. D. Shere) Allocation of Resources to Offensive Strategic Weapon Systems, *Naval Research Logistics Quarterly,* Vol. 23, No. 1 (1976) pp. 85–93.

(with J. Herzfeld and A. E. Berger) A Highly Convergent Algorithm for Computing the Orientation Distribution Functions of Rodlike Particles, *Macromolecules,* Vol. 17 (1984) pp. 1718–1723.

Technical Reports (UNCLASSIFIED):

(with K. D. Shere) Allocation of Resources to Offensive Strategic Weapon Systems, NOLTR 74-14 (20 Feb 1974).

(with K. D. Shere) A Computer Program for the Allocation of Resources to Offensive Strategic Weapon Systems, NOLTR 74-15 (8 Mar 1974).

(with W. W. Hager) Inequalities and Approximation with Applications to VSTOL Aircraft, NSWC TR 78-210 (3 Dec 1978).

(with R. A. Goldstein) Error Covariance Propagation Program and User Manual, University of Miami report MIAMTH-TR6384.1 (Jan 1980).

LINOPT, A FORTRAN Routine for Solving Linear Programming Problems, NSWC TR 80-413 (9 Oct 1981).

(with J. S. Youngs) WOLFQP, Wolfe's Method for Quadratic Programming, NSWC TR 82-30 (17 Mar 1982).

(with E. A. Cohen, Jr.) Application of the Theory of Optimal Control to the Development of Terminal Search Patterns, NSWC TR 87-306 (20 Dec 1987).

(with C. R. Zakary) Network Modeling and Linear Programming Methods for Minefield Logistic Planning, NSWC TR 87-214 (29 Feb 1988).

(with C. Alexion and K. D. Shere) Targeting of SLBMs Subject to ASW and ABM Defenses, Avtec Systems, Inc. AV TR 90-04 (31 May 1990).

(with G. H. Miller and J. W. Enig) Advanced Numerical Methods for Modeling Underwater Explosion Phenomena, Enig Associates, Inc. ENIG TR 98-3 Rev. 1 (August 1998).

(with D. J. Pastine and J. W. Enig) Passive Space-based Detection, Location, Identification, and Characterization of Radiating Underground Chemical Explosions or Other Unequilibrated Sources, Enig Associates, Inc. ENIG TR 01-1 (May 2001).