

September 2004

HILLEL J. KUMIN

ADMINISTRATIVE APPOINTMENTS, THE UNIVERSITY OF OKLAHOMA

Associate Dean, College of Engineering, 1988-2001
Associate Dean, Graduate College, 1988
Assistant Dean, Graduate College, 1982-1988
Acting Director, School of Industrial Engineering, 1975

ACADEMIC APPOINTMENTS, THE UNIVERSITY OF OKLAHOMA

Williams Professor of Engineering, 2002-present
Professor of Industrial Engineering, 1986 - present
Associate Professor of Industrial Engineering, 1971-1986
Assistant Professor of Industrial Engineering, 1968-1971
Associate Professor of Business Administration, 1980-present

EDUCATION

Ph.D., Operations Research, Case Institute of Technology, Cleveland, OH, 1968
M.A., Mathematics, University of Texas, Austin, TX, 1975
B.S., Mathematics, Southern Methodist University, Dallas, TX, 1962

RELATED PROFESSIONAL EXPERIENCE

Senior Research Associate, National Oceanic and Atmospheric Administration, Joint Tsunami Research Effort, Honolulu, Hawaii; awarded to develop a computer simulation of the United States Tsunami Warning System, 1975-1976.

Visiting Professor, Institute for Energy Analysis, Oak Ridge, Tennessee; studied the effects of waste heat from the cooling towers of nuclear power facilities on inadvertent weather modification, Summer, 1974.

Visiting Professor, National Bureau of Standards, Gaithersburg, Maryland; helped develop a Markovian model for the United States Food and Drug Administration to predict the way in which firms respond to being inspected, Summer, 1973.

Research Associate, Booz-Allen Applied Research, Bethesda, Maryland; helped develop a systems analysis transportation model of the Northwest Corridor, Summer, 1966.

Instructor of Mathematics, San Antonio Junior College, San Antonio, Texas, 1964-1965.

MILITARY/GOVERNMENT CONSULTING

U.S. Army Artillery Branch, Ft. Sill, Oklahoma; helped develop and taught an Operations Research course for senior officers.

Oklahoma City Public Schools; performed a systems analysis to help implement a court-ordered desegregation plan for the Oklahoma City public school system. A time-shared interactive class-scheduling program was developed and implemented.

Senior Consultant to Brigadier General Peter G. Olenchuk, Chairman of the Joint Armed Forces Panel to develop a coordinated management system for the DOD Ammunition Production Base (JCAP).

Office of Technology Assessment, U.S. Congress, Washington, D.C.; documented and implemented computer programs analyzing the impact of solar technology on the United States' energy planning.

Army Research and Development Command, Dover, New Jersey; evaluated large-scale linear programming models of production base/stockpile tradeoffs.

Ballistic Missile Defense Command, Huntsville, Alabama; evaluated optimization algorithms for pattern classification.

SCIENTIFIC AND PROFESSIONAL SOCIETIES MEMBERSHIP

Operations Research Society of America
The Institute of Management Sciences
American Society for Engineering Education
Mathematical Programming Society
American Institute of Industrial Engineers

PROFESSIONAL ACTIVITIES

AIIE Associate Program Chairman, OR Division, 1982-83
AIIE Oklahoma City Senior Chapter, Secretary, 1980-81

MAJOR SERVICE ACTIVITIES AT THE UNIVERSITY OF OKLAHOMA

Graduate Council
Academic Programs Council
Faculty Appeals Board
Committee on Sexual Harassment
Industrial Engineering Graduate Programs Advisor

TEACHING

Major advisor to five Ph.D. and eight M.S. students.

Graduate Courses Taught

Applied Stochastic Processes
Design of Production Systems
Applied Operations Research
Mathematical Techniques of Operations Research
Advanced Stochastic Processes

Undergraduate Courses Taught

Engineering Statistics
Engineering Economics
Introduction to Engineering
Introduction to Industrial Engineering
Inventory Models
Deterministic Models of Operations Research
Probabilistic Models of Operations Research

PAPERS PRESENTED

“A Survey of Operations Research Applications in Solar Energy Systems”, (with M. Devine and A. Aly), 60th National ORSA Meeting, October, 1981, Houston, Texas.

“Operations Research Problems in the Economic Design and Operations of Solar Energy Systems”, (with M. Devine and A. Aly), IGT Symposium on Energy Modeling and Net Energy Analysis, Colorado Spring, Colorado, 1978.

“Internally Consistent Thermodynamic Data”, (with Howard Day), American Geophysical Union, 1977, Washington, D.C.

“A Heuristic Technique for Solving Large-Scale Linear Programming Problems”, (with K. Burd, 46th National ORSA Meeting, October, 1974, San Juan, Puerto Rico.

“A Method for the Solution of the Distribution Problem of Stochastic Linear Programming”, (with J. Ewbank), 41st National ORSA Meeting, April, 1972, New Orleans, Louisiana.

“A Dynamic Programming Approach to a Bidder Selection Problem”, (with M. Devine), 29th National ORSA Meeting, May 1971, Dallas, Texas.

“A Systems Study of School Desegregation”, (with R. Lutz and M. Devine), 1970 American Meetings of TIMS, October, 1970, Los Angeles, California.

“An Algorithm for the Design of Markovian Congestion Systems”, 36th National ORSA Meeting, November, 1969, Miami, Florida.

PUBLICATIONS

“Heuristic Policies for Inventory Ordering Problems with Long and Randomly Varying Lead Times”, (with B. L. Foote and N. Kebriaei), Journal of Operations Management, 1988, to appear.

“A Random Walk Approximation for a Solar Energy Storage System”, (with A. Nozari and J. Lalli), Solar Energy, Vol. 37, 1986, p. 127-133.

“Equilibria in the System MgO-SiO₂-H₂O: A Thermodynamic Analysis”, (with H. Day and J.V. Chernosky), American Mineralogist, Vol. 70, 1985, p. 237-248.

“An Analysis of Solar Energy Systems that Use Vapor Compression Cycles”, (with M. Suzuki, M. Devine, and D.B. Turkington), Solar Energy, Vol. 34, 1985, p. 43-47.

“A Survey of Optimization and Stochastic Process Techniques Applied to Solar Energy Systems”, (with M. Devine and A. Aly), TIMS Studies in Management Science and Systems: Energy Models and Studies, 1983, B. Lev., ed., p. 339-352.

“A Convexity Result for a Class of GI/G/1 Queueing Systems”, (with H. Tu), Operations Research, Vol. 31, 1983, p. 948-950.

“Thermodynamic Analysis of the Aluminum Silicate Triple Point: A Linear Programming Approach”, (with Howard Day), American Journal of Science, Vol. 280, March, 1980, p. 265-287.

“Operations Research Problems in the Economic Design and Operation of Solar Energy Systems”, (with M.D. Devine and A. Aly), Proceedings of the IGT Symposium in Energy Modeling and Net Energy Analysis, Colorado Springs, Colorado, August, 1978, p. 619-638.

“A Time-Shared Interactive System for Class Scheduling”, (with R.P. Lutz, M.D. Devine and W. Smith), Computers and Education, Vol. 1, 1976, p. 1-14.

“A Method for the Solution of the Distributions Problem of Stochastic Linear Programming”, (with J. Ewbank and B.L. Foote), SIAM Journal on Applied Mathematics, Vol. 26, 1974, p. 225-238.

“On Characterizing the Extreme of a Function of Two Variables, One of Which is Discrete”, Management Science, Vol. 209, 1973, p. 126-129.

“A Dynamic Programming Approach to a Bidder Selection Problem” (with M.D. Devine), AIEE Transactions, Vol. 3, 1973, p. 33-36.

“Enumeration Sequences of Rooted Trees”, in A Handbook of Integer Sequences, N.J.A. Sloane, Academic Press, New York, 1973.

“Identities on Matrices” (with Kirby Smith), American Mathematical Monthly, Vol. 79, February, 1972, P. 157-158.

“An Application of Operations Research to School Desegregation” (with R.P. Lutz and M.D. Devine), Management Science, Vol. 19, 1971, P., 100-109.

“Some Enumeration Tables for Rooted Trees by Height and Diameter”, Mathematics of Computation, Vol. 25, July, 1971, p. 632.

REPORTS AND OTHER PUBLICATIONS

“Time Series Applications”, Proceedings of the 5th Annual Symposium on Computer Science and Statistics, Oklahoma State University, 1971.

“The Alternate Quantity Bidding Problem”, Army Ammunition and Procurement Supply Agency, Joliet, IL, DAA-09-07-C-043, 1971.

“The Compliance Behavior of Firms Subject to Inspections Modelled as a Semi-Markov Process”, National Bureau of Standards, NBS73-501B, 1973.

“The Effects of Waste Heat from Nuclear Power Plant Facilities on Inadvertent Weather Modification”, Institute for Energy Analysis, Oak Ridge, TN, 1974.

“Introduction to Stochastic Processes” by Erhan Cinlar, book review, Interfaces, Vol. 6, No. 1, 1975, p. 91-92.

“A Simulation Study of the United States Tsunami Warning System”, National Oceanic and Atmospheric Administration, Honolulu, Hawaii, August, 1978.

“Evaluation of Optimization Algorithms for Pattern Classification”, (with Adel Aly and Samuel Lee), Ballistic Missile Defense System Command, final Report, Huntsville, Alabama, 1978.

“An Application of Gould’s Method for Analyzing the Behavior of Solar Energy Storage Systems”, (with S. Desai), The University of Oklahoma, School of Industrial Engineering, Technical Report, TR83-3, 1983.

“A Stochastic Process Model for Solar and Wind Energy Systems”, (with Ardavan Nozari), National Science Foundation, Final Report, 1984.

FUNDED RESEARCH

National Science Foundation: “Stochastic Process Models of Solar Energy Systems”, September 1983-August 1984.

Ballistic Missile Defense System Command: “Optimal Pattern Classifiers”, Summer 1978.

National Science Foundation: “Determination of Thermodynamic Parameters from Phase Equilibrium Data-Criteria for Choosing Solutions”, September 1976-August 1977.

National Science Foundation: “Determination of Thermodynamic Parameters from Phase Equilibrium Data – A Linear Programming Approach”, September 1976-August 1978.

Army Ammunition Procurement and Supply Agency: “Operations Research Algorithms for Range Bidding Problems”, Summer 1969.

National Science Foundation: “Algorithms for the Design of Markovian Congestion Systems”, September 1968-August 1969.

HONORS AND AWARDS

The University of Oklahoma Regents Superior Teaching Award, 1978

National Research Council, Senior-Research Associate, 1975-1976

Alpha Pi Mu, National Industrial Engineering Honorary

PERSONAL

Date of Birth: November 14, 1940

Married, two children

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