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CONTRIBUTORS

Jane C. Ammons, see **Loren K. Platzman.**

Hutton Barron and **Charles P. Schmidt** are both affiliated with the College of Commerce of the University of Alabama. Barron is a professor and Schmidt is an associate professor. Their paper deals with the "sufficiency" of equal weights in additive value models as a dominant idea in psychological decision making. Logic, even simple intuition, tells us that weights do matter. So the authors' original purpose was to demonstrate that weight matters and to find the "most nearly equal" weights that lead to a change in decision. The desirability of considering value loss was suggested to the authors by Ward Edwards, while a referee challenged them to consider an arbitrary set of weights.

John J. Bartholdi III, see **Loren K. Platzman.**

Rajan Batta is an assistant professor in the Industrial Engineering Department at The State University of New York at Buffalo, and **Samuel S. Chiu** is an assistant professor in the Engineering-Economic Systems Department at Stanford University. Their paper proposes several analytical measures of risk associated with the transportation of hazardous materials on a network. These risk measures explicitly account for the specific location of possible enroute accidents, and the proximity of this "hazardous route" to continuously distributed population centers. The proposed framework also incorporates inputs from engineering spill dispersion models in a natural way. These measures may be used in other general transit risk analysis models as input "cost" parameters; here they are used in an optimal route selection setting. The authors are continuing their efforts to develop evaluation and optimization models concerning the transportation of hazardous materials.

Dimitri P. Bertsekas is a professor of electrical engineering and computer science and **Paul Tseng** is a research fellow at the Laboratory for Information and Decision Systems, both at the Massachusetts Institute of Technology. This paper is an outgrowth of Tseng's thesis work in which the relaxation approach is applied to both linear and nonlinear network flow, as well as linear programs and problems with linear constraints and convex, separable costs. Bertsekas' work with Tseng on such problems is part of a long-term effort to develop new serial and parallel computational methods for linear and nonlinear network flow problems based on relaxation ideas. Parts of this work will also appear in the textbook *Parallel and Distributed Computation: Numerical Methods* (Prentice Hall, 1989) that Bertsekas is co-authoring with John Tsitsiklis. Tseng's current research interests include network flow, monotropic programming and parallel computation.

Gabriel R. Bitran is a professor of management science at the Sloan School of Management, Massachusetts Institute of Technology. **Devanath Tirupati** is an assistant professor of management at the Graduate School of Business, the University of Texas at Austin. This research was motivated by an analysis of the operations of a manufacturer of specialty semiconductors. Working jointly with the firm's engineers they identified the processing of wafers in reactors to grow an epitaxial layer as a critical operation. Each reactor costs approximately a million dollars, therefore their effective utilization is of great importance for the success of the company. Presently the firm is using the algorithms developed in the manuscript. The authors have been conducting joint research on modeling semiconductor operations as one of their major activities. Those interested in this topic may wish to read the recent paper by the authors on "Multiproduct Queueing Networks with Deterministic Routing and Decomposition Approach and the Notion of Interference," *Management Science*, Vol. 34, No. 1, January 1988.

Robert F. Bordley is a section manager in General Motors Research Laboratories' Operating Sciences Department. His research interests include decision theory, forecasting, quantum probability measurement, social choice, and demand analysis, and he has published more than two dozen papers in these areas. In his work on decision theory, the author is concerned with enriching the standard decision theory model (without changing its basic assumptions) to more successfully model realistic situations. Specifically in this paper, the author applies decision theory to an individual lottery choice for situations where the gamble is relatively small.

Alexandre Brandwajn is a professor of computer engineering at the University of California Santa Cruz and is also chief technical officer for Pallas International Corporation in San Jose, California. The approximation approach described in this paper reflects

his continuing interest in decomposition techniques in queueing systems. The motivation for looking into the problem of tandem queues with finite buffers was provided by a network design problem at Amdahl Corporation of Sunnyvale, California, where **Yung-Li Lily Jow** is a senior computer performance analyst. Her current research interests include performance evaluation, simulation, and applications of stochastic processes to computers and communications networks.

Xi-Ren Cao is a principal engineer in the High Performance System Group at Digital Equipment Corporation, Marlboro, Massachusetts. This paper is part of the work in the area of perturbation analysis of discrete event systems developed at Harvard University. Dr. Cao's current research interests are in areas of modeling and performance evaluation of computer communication systems, theory and applications of queueing networks, and stochastic optimization.

Samuel S. Chiu, see **Rajan Batta.**

Roger W. Collins, see **Saul I. Gass.**

André Gascon is an associate professor in the Faculte des Sciences de l'Administration at Université Laval, Quebec, Canada. **Robert C. Leachman** is an associate professor of industrial engineering and operations research, University of California at Berkeley. Their paper is part of ongoing research at U.C. Berkeley in production planning and scheduling systems, as well as an outgrowth of Professor Gascon's doctoral dissertation. The research leading to this paper was motivated by the author's studies of packaging lines for consumer products at the Clorox Company. A related paper by the authors entitled, "A Heuristic Scheduling Policy for Multi-Item, Single-Machine Production Systems with Time-Varying, Stochastic Demands" appears in the March 1988 issue of *Management Science.*

Saul I. Gass is a professor at the University of Maryland's College of Business and Management. He has authored many texts including *Linear Programming* (Ed. 5) and *Decision Making, Models and Algorithms.* Gass is a former president of ORSA and is now president of Omega Rho, the international operations research honorary society. His interest in manpower planning stems from research in the solution of large-scale mathematical programs. **Roger Collins**, founder and president of Sigma Systems, Inc., has developed several models for the Department of Defense that focus on the projection of personnel as a function of military personnel policy and environmental factors. These models were instrumental in the establishment of policies regarding the end of the draft, increasing the number of women in the military and the design of new weapon systems. This paper describes the latest system developed. **Marcia D. Gillette**, **Douglas M. Lemon** and **Craig W. Meinhardt**, staff members at Sigma Systems, help design and develop complex analytical tools to support the evaluation of manpower, personnel and training policies and projections for the DoD. Their work on this paper focused upon the development of a user-friendly, responsive, flexible technique that could be used by a military analyst in developing policies and projections over the long term.

Marcia D. Gillette, see **Saul I. Gass.**

Roy Jonker works as an operations research specialist for Shell Research Laboratory, The Netherlands, and **Ton Volgenant** is an associate professor of operations research at the University of Amsterdam. The work reported in this paper is part of a long-term research project on the traveling salesman problem and its variants. Their current research involves set partitioning, vehicle routing and Steiner trees.

Robert C. Leachman, see **André Gascon.**

Douglas M. Lemon, see **Saul I. Gass.**

Yung-Li Lily Jow, see **Alexandre Brandwajn.**

Craig W. Meinhardt, see **Saul I. Gass.**

Robert D. Plante is an associate professor of management at the Krannert Graduate School of Management at Purdue University. His research interests are the design and application of operations research models in quality assurance and production/inventory problems. Much of his research is in the areas of auditing, quality control, and combinatorial optimization. The research reported in this paper is the fourth in a series of research projects that Professor Plante has been involved in that are devoted to the efficient management of nozzle guide inventories for gas turbine engines on commercial and military aircraft. His ongoing work includes the design and implementation of algorithms for the distribution of vane vendor inventories and for the balancing of turbine nozzle rotors.

Loren K. Platzman and **Jane C. Ammons** are assistant professors and **John J. Bartholdi III** is an associate professor in the Georgia Institute of Technology's School of Industrial and Systems Engineering. Although their paper was motivated by industrial engineering practice, in particular Ammons' research on electrical power generation capacity planning, it exploits transform methods in communications theory

and computational complexity. This unusual combination of ideas came about as a consequence of the broad diversity of interests held by the authors, and their efforts to keep each other informed about new developments and stumbling blocks in their respective fields.

András Prékopa is a professor at Rutgers University's Center for Operations Research. He is on leave from the University of Budapest. His research interests include optimization of stochastic systems and their applications to engineering problems. This paper is the result of a continuing effort to obtain good approximation methods to probabilities in higher dimensional spaces which arose in the author's applicational practice in the solution of problems concerning power systems, water reservoir systems and engineering structure design.

Charles P. Schmidt, see **Hutton Barron.**

Antony Svoronos, see **Paul Zipkin.**

Devanath Tirupati, see **Gabriel R. Bitran.**

Paul Tseng, see **Dimitri Bertsekas.**

Ton Volgenant, see **Roy Jonker.**

Paul Zipkin is a professor at Columbia University's Graduate School of Business; his research interests include the development of models for production and distribution systems to support strategic-level planning. **Antony Svoronos** received his Ph.D. from the Graduate School of Business of Columbia University. He is currently affiliated with IBS United Tube Mills (Greece) where his research interests include the development of models for production and distribution systems and the development of techniques to study queueing systems with nonstationary inputs.