

ROBERT S. GARFINKEL

ADDRESS

Operations and Information Management Department
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University of Connecticut
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Storrs, CT 06269
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EDUCATION

Ph.D. in Operations Research, The Johns Hopkins University
B.A. in Mathematics, Brooklyn College

EMPLOYMENT - PERMANENT

1987 - Present:
Robert Cizik Professor, Department Head (1987-1992)
Operations and Information Management Department
School of Business Administration
University of Connecticut

1974 -1987:
Associate Professor, Professor (1979), Chairman (1980-1987)
Management Science Program
College of Business Administration
University of Tennessee

1968 -1974:
Assistant Professor
Graduate School of Management
University of Rochester

POSITIONS - VISITING

2008 - Spring: Aristotel University, Thessaloniki, Greece

1994 - Spring: Universidad Politecnica de Catalunya, Barcelona, Spain

1992 - Summer: Bilkent University, Ankara, Turkey

1988 - Summer: Istituto di Analisi dei Sistemi ed Informatica, Rome, Italy

1984 -1985 - Operations Research Department, Bell Labs, Holmdel, New Jersey

1982 - Summer: Asian Institute of Technology, Bangkok, Thailand

1979 - Summer: Erasmus University, Rotterdam, The Netherlands

1978 - Spring: University of Washington

1977 - Summer: Lecturer in Two Week Conference on Combinatorial Optimization, Urbino, Italy

1972 - Summer: Lecturer in NSF Summer School in Mathematical Programming, Cornell University

COURSES TAUGHT

Combinatorial Optimization

Computational Complexity

Industrial Quality Control

Integer Programming

Introduction to Calculus

Introduction to Mathematical Programming

Introduction to Models

Introduction to Operations Management

Introduction to Operations Research

Introduction to Statistics

Introduction to Teaching and Research for Ph.D. Students

Linear Programming

Location Theory

Network Flows

Scheduling Theory

Urban Applications of Operations Research

PUBLICATIONS

Book

Garfinkel, R., G. Nemhauser. 1972. *Integer Programming*, John Wiley. (Translated into Polish as Programowanie całkowitoliczbowe (1978))

Journal Articles

Schneider, M., R. Day, R. Garfinkel. Loss Aversion, Risk Aversion, and Ambiguity Aversion in Core-Selecting Auctions. Forthcoming in *Decision Support Systems*.

Alirezazadeh, P., F. Boylu, R. Garfinkel, R. Gopal, P. Goes. Optimal Identity Matching via Statistical Estimation and Information Acquisition. Published in *Decision Support Systems*.

Day, R., R. Garfinkel, S. Thompson. 2012. Sharing the Blocks: A Win-Win Strategy for Surgeons and Hospital Operating Room Utilization. *Manufacturing and Service Operations Management* **14**, 567-583

Bapna, R., S. Das, R. Day, R. Garfinkel, J. Stallaert. 2011. A Clock Auction Market for Grid Resources with Uncertain CPU Requirements. *INFORMS Journal on Computing* **23**, 630-647

Pasaniuc, B., R. Garfinkel, I. Mandoiu, A. Zelikovsky. 2011. Optimal Testing of Digital Microfluidic Biochips. *INFORMS Journal on Computing* **23**, 518-529

Day, R., M. Dean, R. Garfinkel, S. Thompson. 2010. Improving Patient Flow in a Hospital Through Dynamic Allocation of Cardiac Diagnostic Testing Time Slots. *Decision Support Systems* **49**, 463-473

Pathak, B., R. Garfinkel, R. Gopal, R. Venkatesan, F. Yin. 2010. Empirical Analysis of the Impact of Recommender Systems on Sales. *Journal of Management Information Systems* **27**, 159-188

Kumar, R., R. Gopal, R. Garfinkel. 2010. Freedom of Privacy: Anonymous Data Collection with Respondent-Defined Privacy Protection. *INFORMS Journal on Computing* **22**, 471-481

Thompson, S., M. Nunez, R. Garfinkel, M. Dean. 2009. Efficient Short Term Allocation and Reallocation of Patients and Staff to Floors of a Hospital during Demand Surges," *Operations Research* **57**, 261-273

Rice, D., R. Garfinkel, R. Gopal. 2008. CVC-STAR: Protecting data confidentiality while increasing flexibility and quality of responses. *International Journal of Information and Computer Security* **2**, 175-196

Garfinkel, R., R. Gopal, B. Pathak, F. Yin. 2008. Shopbot 2.0: Integrating Recommendations and Promotions with Comparison Shopping. *Decision Support Systems* **46**, 61-69

Bapna, R., S. Das, R. Garfinkel, J. Stallaert. 2008. A Market Design for Grid Computing. *INFORMS Journal on Computing* **20**, 100-111

- Nunez, M., R. Garfinkel, R. Gopal. 2007. Stochastic Protection of Confidential Information in Statistical Databases: A Hybrid of Query Restriction and Data Perturbation. *Operations Research* **55**, 890-908
- Garfinkel, R., R. Gopal, S. Thompson. 2007. Releasing Individually Identifiable Microdata with Privacy Protection against Stochastic Threat: An Application to Health Information. *Information Systems Research* **18**, 23-41
- Garfinkel, R., R. Gopal, A. Tripathi, F. Yin. 2006. Design of a Shopbot and Recommender System for a Bundle of Goods. *Decision Support Systems* **42**, 1974-1986
- Garfinkel, R., E. Fernandez, T. Lowe. 2006. The k-Centrum Shortest Path Problem. *Trabajos de Investigacion Operativa (TOP)* **14**, 279 - 292
- Garfinkel, R., R. Gopal, M. Nunez, D. Rice. 2006. Secure Electronic Markets for Private Information. *IEEE Transactions on Systems, Man, and Cybernetics* **36**, 461-471
- Garfinkel, R., E. Fernandez, R. Gopal. 2003. Design of an Interactive Spell Checker: Optimizing the List of Offered Words. *Decision Support Systems* **35**, 385-397
- Fernandez, M., O. Meza, R. Garfinkel, M. Ortega. 2003. On the Undirected Rural Postman Problem: Tight Bounds Based on a New Formulation. *Operations Research* **51**, 281-291
- Garfinkel, R., R. Gopal, P. Goes. 2002. Privacy Protection of Binary Confidential Data against Deterministic, Stochastic, and Insider Threat. *Management Science* **48**, 749-764
- Gopal, R., R. Garfinkel, P. Goes. 2002. Confidentiality Via Camouflage: The CVC Approach to Disclosure Limitation when Answering Queries to Databases. *Operations Research* **50**, 501-516
- Garfinkel, R., I. Webb. 1999. On Crossings, the Crossing Postman Problem, and the Rural Postman Problem. *Networks* **34**, 173-180
- Hooker, J., R. Garfinkel. 1998. The 2-centdian problem: A rejoinder. *Location Science* **6**, 225-227
- Fernandez, E., R. Garfinkel, R. Arbiol. 1998. Mosaicking of Aerial Photographic Maps via Seams Defined by Bottleneck Shortest Paths. *Operations Research* **46**, 293-304
- Gopal, R., P. Goes, R. Garfinkel. 1998. Interval Protection of Confidential Information in a Database. *INFORMS Journal on Computing* **10**, 309-322
- Garfinkel, R., P. Sundararaghavan, C. Noon, D. Smith. 1996. Optimal Use of Hub Facilities: A Two-Hub Model with Fixed Arc Costs *Trabajos de Investigacion Operativa (TOP)* **4**, 331-343
- Hooker, J., R. Garfinkel, C. Chen. 1991. Finite Dominating Sets for Network Location Problems. *Operations Research* **39**, 100-118

- Garfinkel, R., W. Plotnicki. 1990. Fixed Cycle Scheduling: A Solvable Problem with Empty Precedence Structure. *Operations Research* **38**, 629-633
- Hooker, J., R. Garfinkel. 1989. On the Vector Assignment p-Median Problem. *Transportation Science* **23**, 139-140
- Garfinkel, R., A. Kunnathur, G. Liepins. 1988. Error Localization for Erroneous Data: Continuous Data, Linear Edits. *SIAM J. of Scientific and Statistical Computing* **9**, 922-931
- Garfinkel, R., A. Kunnathur, G. Liepins. 1986. Optimal Imputation of Erroneous Data: Categorical Data, General Edits. *Operations Research* **34**, 744-751
- Garfinkel, R., W. Plotnicki. 1986. Scheduling Academic Courses to Maximize Student Flow: A Simulation Approach. *Socio-Economic Planning Sciences* **20**, 193-199
- Garfinkel, R., P. Sundararaghavan. 1984. Hamiltonian Cycles in Striped Graphs: The Two-Stripe Problem. *SIAM J. Algebraic and Discrete Methods* **5**, 463-466
- Liepins, G., R. Garfinkel, A. Kunnathur. 1982. Error Localization for Erroneous Data: A Survey. *TIMS Studies in the Management Sciences* **19**, 205-219
- Chen, C., R. Garfinkel. 1982. The Generalized Diameter of a Graph. *Networks* **12**, 335-340
- Garfinkel, R. S. Selkow. 1981. On Some Conjectures of Gould on the Parities of the Binomial Coefficients. *Fibonacci Quarterly* **19**, 61-63
- Garfinkel, R. 1980. Surrogated Linear Programming Can't Work. *AIIE Transactions* **12**, 206
- Garfinkel, R., W. Plotnicki. 1980. A Solvable Cyclic Scheduling Problem with Serial Precedence Structure. *Operations Research* **28**, 1236-1240
- Garfinkel, R., K. Gilbert. 1978. The Bottleneck Traveling Salesman Problem: Algorithms and Probabilistic Analysis. *J. Assoc. Comp. Mach.* **25**, 435-448
- Church, R., R. Garfinkel. 1978. Locating an Obnoxious Facility on a Network. *Transportation Science* **12**, 107-118
- Garfinkel, R. 1977. Minimizing Wallpaper Waste, Part I: A Class of Traveling Salesman Problems. *Operations Research* **25**, 741-751
- Garfinkel, R., A. Neebe, M. Rao. 1977. The m-Center Problem: Minimax Facility Location. *Management Science* **23**, 1133-1142
- Garfinkel, R., M. Rao. 1976. Bottleneck Linear Programming. *Mathematical Programming* **11**, 291-298

Garfinkel, R., A. Neebe, M. Rao. 1974. An Algorithm for the M-Median Plant Location Problem. *Transportation Science* **8**, 217-236

Garfinkel, R. 1973. On Partitioning the Feasible Set in a Branch and Bound Algorithm for the Asymmetric Traveling Salesman Problem. *Operations Research* **21**, 340-343

Garfinkel, R., M. Rao. 1971. The Bottleneck Transportation Problem. *Naval Research Logistics Quarterly* **18**, 465-472

Garfinkel, R. 1971. An Improved Algorithm for the Bottleneck Assignment Problem. *Operations Research* **19**, 1747-1751

Garfinkel, R., G. Nemhauser. 1970. Optimal Political Districting by Implicit Enumeration Techniques. *Management Science* **16**, B495-508

Garfinkel, R., G. Nemhauser. 1969. The Set Partitioning Problem: Set Covering with Equality Constraints. *Operations Research* **17**, 848-856

Under Revision

None at the moment.

Under Review

Schneider, M., R. Day, R. Garfinkel. Resolving Expected Utility Paradoxes with a Relative-Moments Model. Conditionally accepted at *Management Science*.

Contributions to Books

Garfinkel, R. 1984. The Traveling Salesman Problem: Motivation and Modeling. *The Traveling Salesman Problem*, edited by E. Lawler et al., John Wiley, 17-36

Garfinkel, R. 1979. Branch and Bound Methods for Integer Programming. *Combinatorial Optimization*, edited by N. Christofides et al., John Wiley, 1-20

Garfinkel, R., G. Nemhauser. 1973. A Survey of Integer Programming Emphasizing Computation and Relations Among Models. *Mathematical Programming*, edited by T. Hu and S. Robinson, Academic Press, 77-155

Garfinkel, R., G. Nemhauser. 1973. An Introduction to Integer Programming and its Application in Engineering. *Optimization and Design*, edited by M. Avriel et al., Prentice Hall, 443-472

Garfinkel, R., G. Nemhauser. 1972. Optimal Set Covering: A Survey. *Perspectives in Optimization*, edited by A.M. Geoffrion, Addison Wesley, 164-183

Garfinkel, R., G. Nemhauser. 1971. The Cornchester Congressman: A Problem in Political Districting. *Case Exercises in Operations Research*, edited by Martin and Denison, John Wiley, 113-122

Refereed Conference Proceedings

Bapna, R., S. Das, R. Garfinkel, J. Stallaert. 2004. Market Design for Grid Computing. *Proceedings of the 14th Workshop on Information Technologies and Systems (WITS)*

Garfinkel, R., R. Gopal, A. Tripathi, F. Yin. 2004. Design of a Bundle Shopbot. *Proceedings of the 14th Workshop on Information Technologies and Systems (WITS)*

Garfinkel, R., R. Gopal, P. Goes. 2000. The CVC Approach to Data Security: Binary Confidential Data and Insider Threat. *Proceedings of Computational Statistics (COMPSTAT)*, Utrecht, the Netherlands, Eds. W. Jansen and J. Bethlehem, Statistics Netherlands, 31-32

Gopal, R., R. Garfinkel, P. Goes. 1998. Confidentiality Via Camouflage: The CVC Approach to Database Security. *Statistical Data Protection - Proceedings of SDP 98*, 19-

Gopal, R., P. Goes, R. Garfinkel. 1994. "A Database Security Control Model to Provide Interval Protection of Confidential Data. *Proceedings of the Fourth Annual Workshop on Information Technology and Systems*, 155-164

Working papers

Fernandez, E., R. Garfinkel. 2001. The Euclidean Line -Visiting Traveling Salesman Problem. Working Paper. College of Business. University of Connecticut

Garfinkel, R., M. Segal. 1985. A Single-Period Network Planning Model with Various Circuit-Routing Strategies. Bell Laboratories Technical Memorandum 59513-850809-01

Armstrong, G., R. Garfinkel. 1982. Dynamic Programming Solution of the Single and Multiple Vehicle Pickup and Delivery Problem with Application to Dial-A-Ride. Working Paper No. 162, College of Business, University of Tennessee

Garfinkel, R., P. Sundararaghavan. 1982. The Unit Capacity Pickup and Delivery Problem on a One-Way Loop: A Solvable Traveling Salesman Problem. Working Paper No. 156, College of Business, University of Tennessee

Garfinkel, R. 1975. On Partitioning the Feasible Set in Branch and Bound Algorithms," Working Paper No. 23, College of Business, University of Tennessee

Garfinkel, R., P. Yu. 1975. A Primal-Dual Surrogate Simplex Algorithm: Comparison with the Crisscross Method," Working Paper No. 22, College of Business, University of Tennessee

EXTERNAL FUNDING

1996-1997 (Cartographic Institute of Catalonia). “Automatic Identification of Roads from Aerial Photographs,” (co-principal Investigator)

1994-1995 (Cartographic Institute of Catalonia). “Optimal Mosaicking of Photographic Maps,” (co-principal Investigator)

1994 (Government of Spain). Support for various research projects during sabbatical visit to the Polytechnic University of Catalonia.

1980-1982 (NSF). “Development of Mathematical Models to Determine the Optimal Location of Facilities Objectionable to the Public,” (Principal Investigator)

1980-1981 (Census Bureau). “Optimal Imputation of Erroneous Data,” (Principal Investigator)

SERVICE

Member, Editorial Advisory Committee of *Statistics and Operations Research Transactions* (2003-present)

Student Affairs Committee of INFORMS (1995-1996)

Chair, Nicholson Student Paper Competition for ORSA (1994-1995)

Director of the Ph.D. Program, School of Business Administration, University of Connecticut (1992-1998)

Associate Editor of *Operations Research*, 1976-1982.

Referee for *Operations Research*, *Management Science*, and many other journals.

External examiner for the Masters Program in Operations Research/Computer Science, University of Nairobi and for the Ph.D. Program in Industrial Engineering and Management, Asian Institute of Technology.

MISCELLANEOUS

Presentations and sessions chaired at approximately 75 national and international conferences.

Invited seminars at a number of universities including: Aristotle University (Thessaloniki); Bilkent University (Ankara); Carnegie-Mellon; Clemson; Cornell; INSEAD (Fontainebleau); Johns Hopkins; London School of Economics; MIT; NYU; Polytechnic University of Catalonia

(Barcelona); Princeton; Purdue; Simon Bolivar University (Caracas); Technical University of Lisbon; University of Auckland; University of British Columbia; University of Buenos Aires; University of Iowa; University of Pittsburgh; University of Seville; Virginia Tech; and Yale. Also at a number of nonacademic institutions such as Bell Labs and Bellcore.

CONSULTING

Cartographic Institute of Catalonia, Spain - Mosaicking of Aerial Photographic Maps

Metropolitan District of Hartford - Statistical Testing of Water Meters

Oak Ridge National Laboratories - An Expert System for Data Editing and Imputation

Computer Concepts Corporation - Linear Programming Applications in the Food Industry

R.E.S., Inc. - Development of Vehicle Routing Algorithms

Oak Ridge National Laboratories - A Linear Programming Model for Long Range Planning of Nuclear Fuel Enrichment

Oak Ridge National Laboratories - Optimal Data Editing and Imputation

Pennsylvania Blue Cross/Blue Shield - Determination of Hospital Districts by Integer Programming

DOCTORAL DISSERTATIONS DIRECTED

University of Tennessee

John Hooker, Carnegie-Mellon University (1984)

Anand Kunnathur, University of Toledo (1982)

Eric Chen, (1981)

Gerald Armstrong, (1981)

P.S. Sundararaghavan, University of Toledo (1981)

John Plotnicki, Colorado State University (1980)

Kenneth Gilbert, University of Tennessee (1976)

DOCTORAL DISSERTATIONS CO-DIRECTED

University of Connecticut

Mark Schneider (In progress)

Alirezazadeh, Pantea, 1010 Data (2012)

Rajeev Kumar, Kutztown University (2009)

Sanjukta Das, University of Buffalo (2007)

Bhavik Phatak, University of Indiana at South Bend (2006)
Steven Thompson, University of Richmond (2005)
Daniel Rice, Technology Solutions Expert (2004)

University of Tennessee
Ramaier Sriram, (1990)

University of Rochester
Alan Neebe, University of North Carolina (1974)

MASTERS THESIS DIRECTION

University of Tennessee
Scott Buckels, Oak Ridge National Laboratories (1989)

October, 2015