5771 – 2010

Gabriel Y. Handler - CV

Faculty of Management
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Personal

Born in London, U.K., 1946
Israel Defense Forces; First Lieutenant, 1967-1971
Married + 5 children

Education

1964 G.C.E. Hasmonean Grammar School, London, U.K. (Head Boy, 1963-64).

1967 B.Sc. London School of Economics, London University, U.K.
Economics and Computer Science (Recipient of LSE's Scholarship for Mathematicians for the years 1964-67).

1971 M.Sc. Technion, Israel Institute of Technology, Israel.
Operations Research (with Distinction).

1974 Ph.D. Massachusetts Institute of Technology, U.S.A.
Operations Research. Minor in Transportation.

Employment in academic institutions

1971-1974 Massachusetts Institute of Technology, U.S.A.
Research assistant at the Flight Transportation Laboratory, Department of Aeronautics and Astronautics.

1974-1975 Massachusetts Institute of Technology, U.S.A.
Visiting Assistant Professor, Transportation Systems Division, Department of Civil Engineering and Operations Research Center.

1975-2009 Tel Aviv University, Israel.
Associate Professor, Operations Research and Transportation, Faculty of Management.

1987-1988 University of Massachusetts, Boston, U.S.A.
Visiting Associate Professor
Faculty of Management.

1988-1989 Yeshiva University, New York, U.S.A.
Visiting Associate Professor
Sy Syms School of Business.

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Faculty responsibilities

Responsible for doctoral qualifying examinations in Operations Research, MIT 1975 (with Professor R. Marsten).

Academic Coordinator, Transportation Executive Program, TAU, 1975-6.

Responsible for doctoral qualifying examinations in Operations Research, Faculty of Management, TAU, 1981, 1983, 1985.

Chairman, Operations Research Program, Faculty of Management, and Head, Operations Research Center, TAU, 1985-7.

Head, Transportation Management & Research Institute, TAU, 1996-2000.

Chair at scientific meetings

Chairman, Transportation Problems Session, Operations Research Society of Israel Conference, Beer Sheva, May 1979.

Coordinator, Transportation Session in the international conference "Towards Peace and Beyond", Tel Aviv, June 1979.

Chairman, Location I Session, 12th International Symposium on Mathematical Programming, MIT, Cambridge, Mass., August 1985.

Chairperson, Networks Session, ORSA-TIMS Meeting, Denver 1988.

Chairman, Transportation Modelling Session, EURO XIV, Jerusalem, July 1995.

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Professional activities

Consulting and related assignments including:

Consultant to British Tyre & Rubber Co. Ltd., in development of econometric model of PVC markets; operations research analyst in military R & D; consultant to El Al - Israel Airlines in development of computerised air crew scheduling facility; consultant to Flight Transportation Associates, Boston, Mass. in design of Munich Airport II; arbitrator in rates dispute between Egged-Israel Transport Cooperative and the Israel Armaments Industry.

Invited by Prof. Saaty & Prof. Zoffer to participate in the
Conflict Resolution Seminar
Joseph M. Katz Graduate School of Business
University of Pittsburgh
March, 6-8, 2010.

Scientific journals

Associate Editor - Transportation Science (1987-1989)

Referee for the following journals:
European Journal of Operational Research
Management Science
Networks
Operational Research (U.K.)
Operations Research (U.S.A.)
SIAM Journal on Applied Mathematics
Transportation Science

Scientific counselling

On the Economy and the Sustenance (Ed., I. Brenner and A.A. Lavi), R. Mass, Jerusalem, 2008.

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LIST OF COURSES TAUGHT AT MIT, TAU, and OTHER UNIVERSITIES

G = Graduate course
U = Undergraduate course

MIT COURSES

U 1.143 - Mathematical Optimization Techniques

U 1.102 - Transportation Systems Laboratory

U 1.203 - Transportation Supply Models (with N.H. Wilson)

G 16.77 - Flight Transportation Operations Analysis (with R.W. Simpson)

TAU COURSES

U 225.2116 - Operations Research for Accountants

U 1221.3201- Introduction to Operations Research

G 504.2101 - Linear Programming

G 504.2102 - Dynamic Programming

G 504.2111 - Network Theory and Applications

G 504.3101 - Integer Programming

G 500.2116 - Deterministic Models in Operations Research

G 504.3116 - Selected Problems in Mathematical Programming (Seminar)

G 504.4608 - Urban Transportation Operations Analysis (Seminar)

G 504.4609 - Flight Transportation Operation Analysis (Seminar)

G 504.4617 - Location and Allocation Models in Logistics Problems (Seminar)

G 504.4613 - Integer Programming (Seminar)

G 504.4622 - Transportation Systems Analysis (Seminar)

G 1241.3226- Combinatorial Optimization

G 1231.2115- Introduction to Operations Research

G 1231.2114 Principles of Decision Theory

COURSES TAUGHT AT OTHER UNIVERSITIES

Operations Management, Inventory Control, Managerial Statistics, Management Science Models, Statistics for Business, Operations Research, Mathematical Programming & Operations Research, Systems Analysis.

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Supervision of M.Sc. theses

J. Linur	Computerized Scheduling of Crude-Oil Tankers, December 1977.
N. Levin	Optimum Location on a Weighted Graph, January 1978.
U. Wolf	Location Problems under Uncertainty on a Tree-Graph, February 1978.
A. Dishi	Transportation Planning for Control Teams, November 1978.
S. Schlesinger	Constrained Shortest Path Problems, April 1979. (Co-supervised with I. Zang.)
M. Rozman	Continuous Location Problems on a Network, November 1979.
P. Eliyahu	Solving Integer Programming Problems Using Constrained Shortest Path Techniques, June 1981. (Co-supervised with I. Zang.)
R. Chen	Solution of Location Problems with Euclidean Distances using the Minimax Criterion, June 1982.
D. Vinovski	Multi-Objective Problems on Networks, August 1986. (Co-supervised with O. Berman.)
D. Dvir	Location on Networks: Improved Algorithms, July 1987.
Y. Berenholtz	Computer Aided Faculty Scheduling, July 1987.
M. Bernstein	Reduced Location: Models for Solving Reduced Location Problems in Location Analysis, October 2001.
I. Goren	Algorithms for Finding an Absolute Center of a Network: A Comparative Analysis, January 2002.
Y. Bezalel	On the Complexity of Algorithms for the Absolute Center of a Network, March 2003.
R. Greenwald	A Relaxed Approach to the Center, February 2007.
L. Constantine	Mapping the Network of Directors in Israel, August 2010. (Co-supervised with E. Sulganik and I. Swary.)

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Supervision of Ph.D. theses

D. Trietsch — On the Transportation Network Design Problem, March 1983.

N. Adler-Chanani — The Choice of Optimal Multi-Hub Networks in a Liberalized Aviation Market, October 1998 (Co-supervised with B. Golani).

In Progress

Several Ph.D & M.Sc theses in the area of Decision Theory.

G.Y. Handler

PUBLICATIONS

A. Books

Published

1. Handler, G.Y. and P.B. Mirchandani, *Location on Networks: Theory and Algorithms*, MIT Press, Cambridge, Mass. 1979.

B. Articles

Published

1. Handler, G.Y., Minimax Location of a Facility in an Undirected Tree Graph *Transportation Science* 7, 287-293 (1973).

2. Handler, G.Y., Finding Two-Centers of a Tree: The Continuous Case, *Transportation Science* 12, 93-106 (1978).

3. Handler, G.Y. and I. Zang, A Dual Algorithm for the Constrained Shortest Path Problem, *Networks* 10, 293-309 (1980).

4. Handler, G.Y., The m-Center Problem on a Directed Network, *Transportation Science* 18, 300-302 (1984).

5. Handler, G.Y. and M. Rozman, The Continuous m-Center Problem on a Network, *Networks* 15, 191-204 (1985).

6. Trietsch, D. and G.Y. Handler, On Highway Fuel and Time Expenditures, *Transportation Science* 19, 293-307 (1985).

7. Trietsch, D. and G.Y. Handler, Gilbert and Pollak's Conjecture - A Generalization, *Networks* 15, 365-380 (1985).

8. Handler, G.Y., Medi-Centers of a Tree, *Transportation Science* 19, 246-260 (1985).

9. Berman, O. and G.Y. Handler, Optimal Minimax Path of a Single Service Unit to Non-Service Destinations, *Transportation Science* 21, 115-122 (1987).

10. Chen, R. and G.Y. Handler, A Relaxation Method for the Solution of the Minimax Location-Allocation Problem in Euclidean Space, *Naval Research Logistics Quarterly* 34, 775-788 (1987).

11. Berman, O., G.Y. Handler and D. Einav, The Constrained Bottleneck Problem in Networks, *Operations Research* 38, 178-181 (1990).

12. Berman, O., D. Einav and G.Y. Handler, The Zone-Constrained Location Problem on a Network, *European Journal of Operational Research* 53, 14-24 (1991).

13. Chen, R. and G.Y. Handler, The Conditional p-Center Problem in the Plane, *Naval Research Logistics* 40, 117-128 (1993).

14. Ezra, N., G.Y. Handler and R. Chen, Solving Infinite P-Center Problems in Euclidean Space Using an Interactive Graphical Method, *Location Science* 2, 101-109 (1994).

15. Dvir, D. and G.Y. Handler, The Absolute Center of a Network, *Networks* 34, 109-118 (2004).

C. Chapters in books

Published

1. Handler, G.Y., Complexity and Efficiency in Minimax Network Location, Chapter 10 in *Combinatorial Optimization* (Ed., N. Christofides et al.), John Wiley, 281-314, 1979.

2. Handler, G.Y., P-Center Problems, Chapter 7 in *Discrete Location* Theory (Ed., P.B. Mirchandani and R.L. Francis), John Wiley, 305-347, 1990.

D. Invited Papers at Scientific Meetings

1. Handler, G.Y., Location Problems in Networks, Summer School in Combinatorial Optimization, Sogesta, Italy, 1977.

2. Handler, G.Y., Complexity and Efficiency in Minimax Network Location, International Symposium on Locational Decisions (ISOLDE I), Banff, Alberta, Canada, 1978.

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E. Other Publications

a. Papers presented at scientific meetings

1. Handler, G.Y. and A.R. Odoni, Minimax Location of a Facility in a Graph, *ORSA Bulletin*, Vol. 2, Sup. 1, 43rd ORSA Meeting, Milwaukee, 1973.

2. Handler, G.Y., Double Centers of a Tree, *ORSA Bulletin*, Vol. 22, Sup. 2, 46th ORSA Meeting, San Juan, 1974.

3. Handler, G.Y., Double Centers of a Tree, *ORSA Bulletin*, Vol. 23, Sup. 1, 47th ORSA Meeting, Chicago, 1975.

4. Handler, G.Y., Medi-Centers of a Tree, *ORSA Bulletin*, Vol. 23, Sup. 1, 47th ORSA Meeting, Chicago, 1975.

5. Handler, G.Y. and Y. Feldman, Computational Experience with a Relaxation Algorithm for the m-Center Problem on a Network, *ORSA/TIMS Bulletin*, No. 2, Joint ORSA/TIMS National Meeting, Miami, 1976.

6. Trietsch, D. and G.Y. Handler, The Convexity of Road User Cost as a Function of Slope or Traffic Density, ORSIS, Jerusalem, 1983.

7. Berman, O. and G.Y. Handler, Optimal Minimax Path of a Single Service Unit to Non-Service Destinations, ORSA-TIMS Meeting, Atlanta, 1985.

8. Berman, O., D. Einav and G.Y. Handler, The Zone-Constrained Location Problem on a Network, ORSA-TIMS Meeting, Washington, 1988.

9. Dvir, D. and G.Y. Handler, A New Algorithm for Finding an Absolute Center of a Graph, ORSIS, Tel Aviv, 1991.

10. Brimberg, J. and G.Y. Handler, Trajectory Analysis for Locating a Single Undesirable Facility, EURO XIV, Jerusalem, 1995.

11. Goren, I. and G.Y. Handler, Algorithms for Finding an Absolute Center of a Network – Upper and Lower Bound Approaches, ORSIS, Shefayim, 2002.

b. Reports & articles

1. Classified reports in military operations research, 1967-1971.

2. Handler, G.Y., Airline Crew Scheduling and Zero-One Programming, M.Sc. Dissertation, Technion, Israel, 1971.

3. Handler, G.Y., Construction of a Least Cost Tree on a Directed Network, MIT - Flight Transportation Lab M72-5, 1972.

4. Handler, G.Y., Minimax Location in an Undirected Graph, MIT - Flight Transportation Lab M72-7, 1972.

5. Handler, G.Y., Manpower Allocation with Cyclic Requirements, MIT - Fight Transportation Lab M73-14, 1973.

6. Handler, G.Y. and R.W. Simpson, A Fleet Assignment Model Incorporating Connecting Services-FA-5, MIT - Flight Transportation Lab M74-4, 1974.

7. Handler, G.Y., Fleet Assignment: Resolution of the Phantom Frequency Problem FA-6, MIT - Flight Transportation Lab M74-5, 1974.

8. Handler, G.Y. and R.W. Simpson, A Bibliography of Routing and Scheduling in Transportation Networks, MIT - Flight Transportation Lab M74-8, 1974.

9. Handler, G.Y., Minimax Network Location: Theory and Algorithms, MIT Operations Research Center Report TR-107 and Flight Transportation Lab Report R74-4, Ph.D. Dissertation, 1974.

10. Handler, G.Y., The m-Center Problem: A Relaxation Approach, Working Paper No. 58/6, The Israel Institute of Business Research, Tel Aviv University, Faculty of Management, 1977.

11. Handler, G.Y., The Longest Path to the Center, Tel Aviv University, 1984.

12. Handler, G.Y., Dial-a-ride: An Innovative Transportation System, *Maariv, Assakim* (Hebrew) (1984).

13. Berman, O., D. Einav and G.Y. Handler, A Location-Repositioning Problem, 1992.

14. Handler, G.Y., Kosher Money: Ethical Issues in Commerce (Review), *Status* 48, 64-65 (Hebrew) (1995).

15. Handler, G.Y., A Proposal for Improving Urban Transportation: Interide, 2004

F. Seminars & Lectures

MIT - Flight Transportation Laboratory Seminar, March 1972.
Airline Crew Scheduling. A Systems View in Airline Management.

MIT - Flight Transportation Laboratory/Operations Research Center joint Symposium on Large Scale Optimization in Flight Transportation, May 1972.
Airline Crew Scheduling.

MIT - Operations Research Center Seminar, October 1974. Location on Networks.

MIT - Mathematics Department Seminar, 1975. Location on Networks.

TAU - Management Faculty Seminar, December 1975.
Location of Emergency Facilities on a Network.

TAU - Operations Research Center Seminar, January 1976.
Minimax Network Location - Set Covering Solutions.

TAU - M. Ofer Foundation Memorial Lecture, May 1976.
Location of Emergency Facilities in a Transportation Network.

TAU - Tel Aviv Municipality joint Winter School, February 1977.
Transportation Systems Analysis.

Technion - Faculty of Industrial and Management Engineering.
Operations Research Seminar. Location on Networks.

Carnegie-Mellon University - Graduate School of Business Administration Seminar, May 1978. Location on Networks.

Columbia University - Operations Research/Industrial Engineering Seminar, October 1986. Location Theory and Combinatorial Optimization.

TAU - Memorial Lecture for Fallen Soldiers, Faculty of Management, 1990, Judaism and Science.

TAU - Institute for Transportation Management, January 1993.
The Challenge for Urban Transportation in Israel Towards the Year 2000 - Efficient Utilization of Existing Resources.

Jewish Agency & Mizrachi Federation - Jerusalem 3000 Seminar, Bournemouth, U.K., June 1996. Torah & Science: From Antagonism to Harmony.

TAU - Operations Research and Decisions Seminar, June 2002.
A Relaxed Approach to the Center.