

CURRICULUM VITAE

PERSONAL

Birth: March 2, 1946 - Israel
Marital Status: Married, two Children
Citizenship: Israeli
Business Address: The Academic College of Tel Aviv Jaffa, 2 Rabenu Yeruham St. Jaffa
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Military Service: Israeli Defense Forces 1964-1966

ACADEMIC DEGREES

1970 B.Sc. - Technion - Israel Institute of Technology.
1974 D.Sc. - Technion - Israel Institute of Technology.

ACADEMIC APPOINTMENTS

2006 (Oct.)- Professor of Management, The Academic College of Tel Aviv - Jaffa
2006 (Oct.)- Professor Emeritus, Faculty of Management, The Leon Recanati Graduate
School of Business Administration, Tel Aviv University, Tel Aviv, Israel.
1975 -2006 Faculty of Management (Professor since 1988), The Leon Recanati
Graduate School of Business Administration, Tel Aviv University, Tel
Aviv, Israel.
1986 - 1989, Visiting Professor, department of Managerial Economics and Decision
1992 - 1993 Sciences, J. L. Kellogg Graduate School of Management, Northwestern
1999 – 2000 University, Evanston IL, USA
1980 - 1982 Visiting Associate Professor, Faculty of Commerce and Business
Administration, The University of British Columbia, Vancouver, B.C.,
Canada
1974 - 1975 Visiting Professor, Center for Operations Research and Econometrics, 34
Voie du Roman Pays, 1348 Louvain la Neuve, Belgium.

FACULTY ACTIVITIES

1978 - 1980, 1983 - 1985	Chairman, Operations Research Program, Faculty of Management, Tel Aviv University, Tel Aviv, Israel.
1990 - 1992	Chairman, Ph.D. Program, Faculty of Management, Tel Aviv University, Tel Aviv, Israel.
1990 – 1992	Member, Promotion and tenure committee, Faculty of Management, Tel Aviv University, Tel Aviv, Israel.
1994 – 1999	Dean, Faculty of Management, Tel Aviv University, Tel Aviv, Israel.
2001 - 2005	Vice Rector, Tel Aviv University, Tel Aviv, Israel.
2005 - 2006	Academic Director, Executive MBA Programs, Faculty of Management, Tel Aviv University.
2006- 2007	Academic Director, the Kellogg – Recanati International Executive MBA Program, Faculty of Management, Tel Aviv University.
2006 - 2008	Vice President for Academic Affairs and Head of School of Management and Economics, the Academic College of Tel Aviv – Jaffa, Tel Aviv, Israel.
2006 - 2008	Vice President for Academic Affairs and Dean of School of Management and Economics, the Academic College of Tel Aviv – Jaffa, Tel Aviv, Israel.
2008 - 2011	President, the Academic College of Tel Aviv – Jaffa, Jaffa, Israel.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

Institute for Operations Research and the Management Sciences (INFORMS)
Operations Research Society of Israel (ORSIS)

RECENT RESEARCH INTERESTS

1. Operations Research - mathematical programming.
2. Economics of R&D and joint enterprises, product and process innovation,
competition and cooperation in R&D.
3. Antitrust and regulation. Antitrust aspects of merger by acquisition,
collaborative R&D, and joint advertising.
4. Allocation of joint costs and profits, "fair" allocation mechanisms, cost
allocation and regulation of natural monopolies.

OTHER PROFESSIONAL ACTIVITIES

1990 - 1992	President, The Operations Research Society of Israel
1994 - 1996	Member of the Nominations Committee for the board of the Tel Aviv Stock

	Exchange.
1996 - 1997	Board member - Clal Trading (one of the five subsidiaries of the Clal Israel Group).
1994 - 1999	Member of the Nominations Committee for the board of Maalot.
1996 - 2002	Board member - Netivot Pension Fund.
1997 - 2002	Board member - I. D. B. Holdings.
1998 - 2003	Board member - Elco Holdings.
2004- 2010	Board member – Knafaim Holdings.
2005 -	Board member – Electra Real Estate.
2007 - 2011	Member of the Audit Committee, Bank of Israel.

CONSULTING ACTIVITIES

1987	Goldman, Sachs & Co., Financial Strategies Group, 85 Broad St., New York, NY 10004.
1990 -	Various consulting activities ranging from expert witnessing to development of financial management optimization software for various financial and private institutions in Israel.

COMMUNITY ACTIVITIES

2001 -	Founding Chairman (until 2007-- continuing as member), IMPACT Scholarship Board (an American Scholarship project for ex-combat needy soldiers. The project is distributing over 2000 scholarship @ \$10,000,000 during 2009-10).
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GRANTS

1990 - 1992	The Israel Foundations Trustees - Merger by Acquisition.
1975 - 1994	The Israel Institute for Business Research - 13 grants awarded.
1979 - 1980	The Israel National Academy of Science.
1980 - 1981	University of British Columbia Research Grants - Two grants awarded.
1981	Natural Sciences and Engineering Research Council of Canada grant no. A5166.
1982 - 1983	NSF Grant SES-81-06207 - Applications of Game Theory and Mathematical Programming to Cost Allocation Problems.
1984 - 1986	NSF Grant SES-83-19069 - Industrial Organization, Dynamics and Game Theory.
2001 - 2002	Government of the Brussels Capital region, Research in Brussels grant – The Brussels Museum Pass: A Game Theory approach.

AWARDS

1985 Oded Levin Prize (awarded by the Operations Research Society of Israel), for the paper "An Application of the Aumann-Shapley Prices for Cost Allocation In Transportation Problems" by D. Samet, Y. Tauman and I. Zang.

ISRAEL ZANG - LIST OF PUBLICATIONS

A. THESIS

"Generalized Convex Programming," D.Sc. Dissertation, Technion, Haifa, Israel, 1974 (in Hebrew).

B. ARTICLES

1. Avriel, M. and I. Zang, "Generalized Convex Functions with Applications in Nonlinear Programming," in *Mathematical Programs for Activity Analysis*, Van Moeseke, P. (Ed.), North Holland, Amsterdam, 1974, pp. 23-33.
2. Zang, I. and M. Avriel, "On Functions Whose Local Minima are Global," *Journal of Optimization Theory and Applications*, Vol. 16, Nos. 3-4 (1975), 183-190.
3. Zang, I., E. U. Choo and M. Avriel, "A Note on Functions whose Local Minima are Global," *Journal of Optimization Theory and Applications*, Vol. 18, No. 4 (1976), 555-559.
4. Zang, I., E. U. Choo and M. Avriel, "On Functions whose Stationary Points are Global Minima," *Journal of Optimization Theory and Applications*, Vol. 22, No. 2 (1977), 195-208.
5. Vial, J. Ph. and I. Zang, "Unconstrained Optimization by Approximation of the Gradient Path," *Mathematics of Operations Research*, Vol. 2, No. 3 (1977), 253-265.
6. Zang, I., "A New Arc Algorithm for Unconstrained Optimization," *Mathematical Programming*, Vol. 15, No. 1 (1978), 36-52.
7. Tishler, A. and I. Zang, "A Switching Regression Method Using Inequality Conditions," *Journal of Econometrics*, Vol. 11, No. 2/3 (1979), 259-274.
8. Ginsburgh, V., A. Tishler and I. Zang, "Alternative Estimation Methods for Two-Regime Models: A Mathematical Programming Approach," *European Economic Review*, Vol. 13, No. 2 (1980), 207-228.
9. Zang, I., "A Smoothing-Out Technique for Min Max Optimization," *Mathematical Programming*, Vol. 19, No. 1 (1980), 61-77.
10. Handler, G. Y. and I. Zang, "A Dual Algorithm for the Constrained Shortest Path Problem," *Networks*, Vol. 10, No. 4 (1980), 293-310.

11. Avriel, M. and I. Zang, "Generalized Arcwise Connected Functions and Characterizations of Local-Global Minimum Properties," *Journal of Optimization Theory and Applications*, Vol. 32, No. 4, (1980), 407-425.
12. Schaible, S. and I. Zang, "On the convexifiability of Pseudo-Convex C2 Functions," *Mathematical Programming*, Vol. 32, No. 3 (1980), 289-299.
13. Schaible, S. and I. Zang, "Convexifiable Pseudo-Convex and Strictly Pseudo-Convex C2 Functions," in *Optimization and Optimal Control*, Auslender, A., W. Oettli and J. Stoer (Eds.) Lecture Notes in Control and Information Systems No. 30, Springer Verlag, Berlin, 1981, pp. 105-107.
14. Zang, I., "Discontinuous Optimization by Smoothing," *Mathematics of Operations Research*, Vol. 6, No. 1 (1981), 140-152.
15. Tishler, A. and I. Zang, "A Maximum Likelihood Method for Piece-wise Regression Models with a Continuous Dependent Variable," *Journal of the Royal Statistical Society Series C (Applied Statistics)*, Vol. 30, No. 2 (1981), 116-124.
16. Diewert, W. E., M. Avriel and I. Zang, "Nine Kinds of Quasi-Concavity and Concavity," *Journal of Economic Theory*, Vol. 25, No. 3 (1981), 397-420.
17. Donath, N., S. Globerson and I. Zang, "A Learning Curve Model for a Multiple Batch Production Process," *The International Journal of Production Research*, Vol. 19, No. 2 (1981), 165-175.
18. Zang, I., "Concavifiability of C2 Functions: A Unified Exposition," in *Generalized Concavity in Optimization and Economics*, Schaible, S. and W. T. Ziemba (Eds.), Academic Press, New York, 1981, pp. 131-152.
19. Tishler, A. and I. Zang, "A New Maximum Likelihood Algorithm for Piece-wise Regression," *Journal of the American Statistical Association*, Vol. 76, No. 376 (1981), 980-987.
20. Tishler, A. and I. Zang, "An Absolute Deviation Curve Fitting Algorithm for Non-Linear Models," *TIMS Studies in the Management Science, Vol. 19 - Optimization in Statistics*, Zanakis, S. H. and I. Rustagi (Eds.), North Holland, Amsterdam, 1982, pp. 81-103.
21. Samet, D., Y. Tauman and I. Zang, "An Application of the Aumann-Shapley Prices for Cost Allocation in Transportation Problems," *Mathematics of Operations Research*, Vol. 9, No. 1 (1984), 25-42.

22. Tishler, A. and I. Zang, "A Min-Max Algorithm For Non-Linear Regression Models," *Applied Mathematics and Computation*, Vol. 13 (1983), 95-115.
23. Mirman, L. J., Y. Tauman and I. Zang, "Monopoly and Sustainable Prices as a Nash Equilibrium In Contestable Markets," in *Issues in Contemporary Microeconomics*, Flewel, G. R. (Ed.), MacMillan Company, London, 1984, 328-339.
24. Mirman, L. J., Y. Tauman and I. Zang, "Supportability, Sustainability and Subsidy Free Prices," *The Rand Journal of Economics*, Vol. 16, No. 1 (1985), 114-126.
25. Mirman, L. J., Y. Tauman and I. Zang, "On the Use of Game Theoretic Concepts in Cost Accounting," in *Cost Allocation: Methods Principles and Applications*, H. Peyton Young (Ed.), North Holland, 1985, pp. 55-77.
26. Mirman, L. J., Y. Tauman and I. Zang, "Ramsey Prices, Average Cost Prices and Price Sustainability," *International Journal of Industrial Organization*, Vol. 4, No. 2, (1986).
27. Kamien, M. I., Y. Tauman and I. Zang, "Optimal License Fees for a New Product," *Mathematical Social Sciences*, Vol. 16, No. 1 (1988), 77-106.
28. Kamien, M. I. and I. Zang, "The Limits of Monopolization Through Acquisition," *Quarterly Journal of Economics*, Vol. 105, May (1990), 465-499.
29. Kamien, M. I., and I. Zang, "Competitively Cost Advantageous Mergers and Monopolization." *Games and Economic Behavior*, Vol. 3, No. 3 (1991), 323-338.
30. Mirman, L. J., Y. Tauman and I. Zang, "Cooperative Behavior in a Competitive Market," *Mathematical Social Sciences*, Vol. 22 (1991), 105-121.
31. Kamien, M. I., E. Muller and I. Zang, "Research Joint Ventures and R&D Cartels." *American Economic Review*, Vol. 82, No. 5 (1992), 1293-1306.
32. Kamien, M. I., and I. Zang, "Monopolization by Sequential Acquisition," *The Journal of Law, Economics, & Organization*, Vol. 9, No. 2 (1993), 205-229.
33. Kamien, M. I., and I. Zang, "Competing Research Joint Ventures," *Journal of Economics & Management Strategy*, Vol. 2, No. 1 (1993), 23-40.
34. BarNiv (Burnovski), M. and I. Zang, ""Costless" Indirect Regulation of Monopolies with Substantial Entry Cost" *The International Journal of Game Theory*, Vol. 28, Issue 1, (1999), 35-52.
35. Kamien, M. I., and I. Zang, "Virtual Patent Extension by Cannibalization",

Southern Economic Journal, Vol. 66. No. 1, (1999), 117-131.

36. Kamien, M. I., and I. Zang, "Meet me Halfway: Research Joint Ventures and Absorptive Capacity" *International Journal of Industrial Organization*, Vol. 18, No. 7, (2000), 995-1012.
37. Ginsburgh, V., and I. Zang, "The Museum Pass Game and its Value", *Games and Economic Behavior*, Vol. 43 (2003), 322-325.
38. Ginsburgh, V., and I. Zang, "Sharing the Income of a Museum Pass Program", *Museum Management and Curatorship*, Vol. 19, No. 4, (2004), 371-383.
39. Ginsburgh, V., and I. Zang, "Bundling by Competitors and the Sharing of Profits", *Economics Bulletin*, Vol. 12, No. 16, (2007), 1-9.
40. Kamien, M., and I. Zang, "Coopting "Decisive" Technical Advances", in *The Economics of Innovation: Incentives, Cooperation, and R&D Policy*, Cellini, R. and L/ Lambertini (Eds), Emerald, 2008, 113-128.

E. BOOKS

41. Avriel, M., W. E. Diewert, S. Schaible and I. Zang, *Generalized Concavity*, Plenum Press, New York, 1988 (reissued as SIAM Classics in Applied Mathematics series, Vol 63, 2010).

F. OTHER PUBLICATIONS

42. Beja, A. and I. Zang, "Profit and Cost Allocation for Efficient Decentralized Control."

G. PAPERS IN PROGRESS

43. "Research Joint Venture Subsidiaries" (with M. Kamien).
44. "On Brand Management in Pharmaceuticals" (with J. Conley and M. Kamien)
45. "Advertising, Product Differentiation and Cooperation" (with M. Barniv)

H. CITATIONS

1. A total of over 3000 citations (Google Scholar)

2. Maximum number of citations over 1000 (paper # 31)
3. For the full list see [Israel Zang's citations: Google Scholar](#)