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## CURRICULUM VITAE

SHOSHANA ANILY

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### I. Biographical Data

Place of Birth: Israel  
Citizenship: Israeli, Italian  
Languages: Hebrew, English and French

### A. Education

1975 - 1978	B.Sc., Magna Cum Laude, Mathematical Sciences, Tel Aviv University, Israel.
1978 - 1980	Mathematics Teaching Certificate, Education Department, Tel Aviv University, Israel.
1978 - 1983	M.A., Magna Cum Laude, Department of Statistics, Tel Aviv University, Israel. Master's thesis under the supervision of Professor Refael Hassin.
1986	Master of Philosophy in Management Science, Graduate School of Business, Columbia University.
1983 - 1987	Ph.D. in Management Science, Graduate School of Business, Columbia University. Dissertation under the supervision of Professor Awi Federgruen. Completion date: January 1987. "Integrating inventory control and transportation planning"

## B. Academic and Professional Experience

1986 - 1989	Assistant Professor, Management Science Division, Faculty of Commerce and Business Administration, the University of British Columbia, Vancouver, B.C., Canada.
1988 - 1991	Lecturer, Faculty of Management, The Leon Recanati Graduate School of Business Administration, Tel Aviv University, Israel.
Summer 1990	Visiting Associate Professor, Graduate School of Business, Columbia University, New York, NY 10027.
1991 - 1997	Senior Lecturer (with tenure), Faculty of Management, The Leon Recanati Graduate School of Business Administration, Tel Aviv University, Israel.
1996 - 1997	Visiting Associate Professor, Graduate School of Business, Columbia University, New York, NY 10027.
Summer 1997	Visiting Professor, Chair of Prof. Liebling, Mathematics Department, Ecole Polytechnique Federale De Lausanne, Switzerland.
1997 – 2002	Chair of the Operations Research and Decisions Program, Faculty of Management, Tel-Aviv University.
1997 – 2004	Associate Professor, Faculty of Management, The Leon Recanati Graduate school of Business Administration, Tel Aviv University, Israel.
Summer 2002	Visiting Professor, Chair of Prof. Laporte, Centre de Recherche sur les Transports, University of Montreal, Montreal, Quebec, Canada.
2004 – present	Full Professor, Coller School of Management, Tel Aviv University, Israel.
Summer 2018	Visiting Professor at the Sauder School of Business, University of British Columbia, Vancouver, Canada

## C. Professional Activities

1997 –	Chair of the Operations Research and Decisions Program, named later the Operations and Strategy Program at the Faculty of Management, Tel-Aviv University.
2003 - 2005	Elected president of <i>ORSIS (Operations Research Society In Israel)</i>
1999 - 2008	Tel Aviv University representative in the council of <i>ORSIS</i> .
1996 – 2005	Associate Editor for the <i>Operations Research</i> Journal of INFORMS in the areas of <i>Logistics and Supply Chain Operations</i> and <i>Manufacturing Operations</i> invited by four area editors: Steve Nahmias, Garrett van Ryzin, and Fangruo Chen and Jan van Mieghem.
2000 – 2022	The <i>Operational Strategy</i> Department Head at Recanati and then Coller School of Management.
2014 - 2020	MALAG - Member of the MALAG promotion committee
2019	A senate representative in the committee for electing a president to Tel-Aviv University

## D. Academic and Professional Awards and Grants

1975- 1978	Dean's List, Mathematical Sciences, Tel Aviv University.
1978 - 1983	Tel Aviv University fellowship and scholarship.
1984	Dean's List, Business School, Columbia University.

1983 - 1986	Columbia University fellowship and scholarship.
1986	Commended paper in the 1986 Nicholson Prize competition.
1987	First prize in the dissertation competition of the Transportation Science Section of ORSA.
1987	First prize in the dissertation competition of the Decision Sciences Institute.
1987	Three-year grant from the Natural Sciences and Engineering Research Council of Canada - NSERC.
1990	Oded Levin Prize for the paper "Multi-item replenishment and storage problem (MIRSP): heuristics and bounds", given by ORSIS - Operations Research Society in Israel.
1996-1997,2001	<i>Operations Research</i> Meritorious Service Award, granted by the editorial board of <i>Operations Research</i> Journal of INFORMS.
2008-2011	Israel Science Foundation (ISF), PI with Moshe Haviv for "Cooperative Production, Inventory and Queuing Games". 112K NIS per year.
2012-2015	Israel Science Foundation (ISF), PI for "Cooperative games and line balancing issues in production and service systems". 93K NIS per year
2015-2018	Israel Science Foundation (ISF), PI for "Applications of solvable 3-D assignment problems and polynomial algorithms to cooperative queuing games". 130K NIS per year
2017	Coller Foundation, PI for "Production planning and scheduling in multi-product, multi machine settings." \$20,000
2018	Coller Foundation, PI for "The price of anarchy in loss systems." \$20,000

## E. Membership in Professional Societies

1985-present	INFORMS (previously ORSA/TIMS) (USA)
1990-present	ORSIS (ISRAEL)
1990-present	EURO (European Society of OR)

## F. Students Supervised by Candidate Ph.D. and Post-doc Students

Aharona Pfeffer (2014) "Transshipment problems: swapping and repositioning: A study on the uncapacitated Swapping and dial-a-ride problems on different graphs."

Tzvi Alon (2021) jointly with Moshe Haviv from Hebrew University, "The basic core of a parallel matching scheduling game"

Gabi Hanukov (2018) Post-Doc "Ticket queues with regular and strategic customers" jointly with Uri Yechiali from Tel Aviv University

Nitsan Perach (started in 2017) on matching groups

### M.Sc. Students

1990	Mary Speicher, "Capacitated Vehicle Routing Problems with Bin Packing Features".
1991	Mordechai Feldman, Master, "Simulated Annealing Model for the Optimal Operation of a Water Supply System".
1994	Izzet Israel Biton, "Serial Multistage Production System with a Single Bottleneck and Rigid Demand; Bottleneck with Discrete Uniform Distributed Yield".

- 1995 Amit Mendel, "Multiple Lot-Sizing for a Single Machine with Geometric Yield and Rigid Demand".
- 2002 Tal Ben-Zvi, "Two-Echelon Production Systems with Rigid Demand".
- 2002 Jonathan Natan Duanis, "Batch production with Binomial-Interrupted-Geometric Yield: Non-Rigid Demand and Rigid Demand with Inspection".
- 2004 Aharon Pfeffer, "Uncapacitated Swapping Problems on a Line".
- 2004 Noam Goldberg, "The Connected Facility Problem with an Application to Virtual Private Networks".
- 2005 Noam Shamir, "The Joint Replenishment Problem with a Capacity Restriction"

## PUBLICATIONS

1. "Simulated Annealing method with general acceptance probabilities", Anily S. and A. Federgruen (1987), *Journal of Applied Probability*, Vol. 24, No. 3, pp. 657-667.
2. "Ergodicity in parametric non-stationary Markov chains: An application to simulated annealing methods", Anily, S. and A. Federgruen (1987), *Operations Research*, Vol. 35, No. 6, pp. 867-874.
3. "Ranking the best binary trees", Anily S. and R. Hassin (1989), *SIAM Journal on Computing*, Vol. 18, No. 5, pp. 882-892.
4. "Structured partitioning problems", Anily S. and A. Federgruen, (1991), *Operations Research*, Vol. 39, No. 1, pp. 130-149.
5. "Capacitated two-stage multi-item production/inventory model with joint setup cost", Anily S. and A. Federgruen (1991), *Operations Research*, Vol 39, No. 3, pp. 443-455.
6. "Multi-item replenishment and storage problem (MIRSP): Heuristics and bounds", Anily S. (1991), *Operations Research*, Vol. 39, No. 2, pp. 233-243.
7. "A class of Euclidean routing problems with general cost functions", Anily S. and A. Federgruen (1990), *Mathematics of Operations Research*, Vol. 15, 268-285.
8. "One warehouse multiple retailer inventory systems with vehicle routing costs", Anily S. and A. Federgruen (1990), *Management Science*, Vol. 36, No. 1, pp. 92-114.
9. "Rejoinder to comments on one warehouse multiple retailer systems with vehicle routing costs", Anily S. and A. Federgruen (1991), *Management Science*, Vol. 37, No. 11, pp. 1496-1499.
10. "The swapping problem", Anily S. and R. Hassin (1992), *Networks*, Vol. 22, pp. 419-433.
11. "The general multi-retailer EOQ problem with vehicle routing costs", Anily S. (1994), *European Journal of Operational Research*, Vol. 79, No. 3, pp. 69-91.

12. "Worst-case analysis of heuristics for the bin-packing problem with general cost structures", Anily S., J. Bramel and D. Simchi-Levi (1994), *Operations Research*, Vol. 42, No. 2, pp. 287-298.
13. "Two-echelon distribution systems with vehicle routing costs and central inventories", Anily S. and A. Federgruen (1993), Special Issue on Stochastic and Dynamic Models in Transportation, edited by M. Dror, *Operations Research*, Vol. 41, No. 1, pp. 37-47.
14. "Single machine lot-sizing with uniform yields and rigid demands: robustness of the optimal solution", Anily S. (1995), *IIE Transactions*, Vol. 27, pp. 625-633.
15. "The Traveling Salesman Problem with delivery and backhauls", Anily S. and G. Mosheiov (1994), *Operations Research Letters*, Vol. 16, No. 1, pp. 11-18.
16. "The Vehicle Routing Problem with delivery and backhauls", Anily S. (1996), *Naval Research Logistics*, Vol. 43, pp. 415-434.
17. "The scheduling of maintenance service", Anily S., C.A. Glass and R. Hassin (1998), *Discrete Applied Mathematics*, Vol. 82, pp. 27-42.
18. "Scheduling of maintenance services to three machines", Anily S., C.A. Glass and R. Hassin (1999), *Annals of Operations Research*, Vol. 86, pp. 375-391.
19. "Inferring the distribution of households' duration of residence from data on current residence time", Anily S., J. Hornik and M. Israeli (1999), *Journal of Business & Economic Statistics*, Vol. 17, pp. 373-381.
20. "The swapping problem on a line", Anily S., M. Gendreau and G. Laporte (1999), *SIAM Journal on Computing.*, Vol. 29, pp. 327-335.
21. "Approximation algorithms for the capacitated traveling salesman problem with pickups and deliveries", Anily S. and J. Bramel (1999), *Naval Research Logistics*, Vol. 46, pp. 654-670.
22. "Optimal sequencing of tasks on a tree shaped structure", Anily S., M. Gendreau and G. Laporte (1999), *Ricerca Operativa*, Vol. 29, pp. 3-14.
23. "A  $5/3$ -approximation algorithm for the clustered traveling salesman tour and path problems", Anily S., J. Bramel and A. Hertz (1999), *Operations Research Letters*, vol. 24, pp. 29-35.
24. "Periodic scheduling with service constraints", Anily S. and J. Bramel (2000), *Operations Research*, Vol. 48, pp. 635-645.
25. "Optimal lot sizes with geometric production yield and rigid demand", Anily S., A. Beja and A. Mendel (2002), *Operations Research*, Vol. 50, pp. 424-432.
26. "An asymptotic 98.5% - effective lower bound on fixed partition policies for the inventory-routing problem", Anily S. and J. Bramel (2004), the GO IV Special Issue of *Discrete Applied Mathematics*, Vol. 145, pp. 22-39.

27. "A probabilistic analysis of a fixed partition policy for the inventory-routing problem", Anily S. and J. Bramel (2004), *Naval Research Logistics*, Vol. 51, pp. 925-948.
28. "Shipping multi-items by capacitated vehicles - an optimal dynamic programming approach", Anily S. and M. Tzur (2005), *Transportation Science*, Vol. 39, pp. 233-248.
29. "Algorithms for the Multi-item Multi-vehicles Dynamic Lot Sizing Problem", Anily S. and M. Tzur (2006), *Naval Research Logistics*, Vol. 53, pp. 157-169.
30. "An optimal lot sizing and off-line inspection policy in the case of non-rigid demand", Anily S. and A. Grosfeld-Nir (2006), *Operations Research*, Vol. 54, pp. 311-323.
31. "Lot-sizing two echelon assembly systems with random yields and rigid demand", Grosfeld-Nir, A., S. Anily and T. Ben-Zvi (2006), *European Journal of Operational Research*, Vol. 173, pp. 600-616.
32. "The cost allocation problem for the First Order Interaction Joint Replenishment Model", Anily S. and M. Haviv (2007), *Operations Research*, Vol. 55, pp. 292-302.
33. "Comments on: static pickup and delivery problems: a classification scheme and survey," Anily, S. (2007), *TOP*, An Official Journal of the Spanish society of Statistics and Operations Research, Vol. 15, pp. 32-34.
34. "Multi-item lot-sizing with a joint set-up cost", Anily S, M. Tzur and L.A. Wolsey (2009), *Mathematical Programming*, Vol. 119 (1), pp. 79-94.
35. "Cooperation in service systems", Anily S. and M. Haviv (2010), *Operations Research*, Vol. 58, pp. 660-673.
36. "The preemptive swapping problem on a tree", Anily S., M. Gendreau and G. Laporte (2011), *Networks*, Vol 58, pp. 83-94.
37. "The uncapacitated swapping problem on a line and on a circle", Anily S. and R. Pfeffer (2013), *Discrete Applied Mathematics*, Vol. 161 454-465.
38. "Pricing, replenishment, and timing of selling in a market with heterogeneous customers," Anily S. and R. Hassin (2013), *International Journal of Production Economics*, Vol. 145, pp. 672-682
39. "Sub-additive and homogenous of degree one games are totally balanced", Anily, S. and M. Haviv (2014), *Operations Research*, Vol. 62, pp. 788-793
40. "Line-balancing in parallel M/M/1 lines and loss systems as cooperative games," Anily, S. and M. Haviv (2017), *Production and Operations Management*, Vol. 26, 1568-1584
41. "Full characterization of the nonnegative core of some cooperative games," Anily, S. (2018), *Naval Research Logistics*, Vol. 65, pp. 303-316.
42. "Ticket queues with regular and strategic customers," Hanukov, G., S. Anily and U. Yechiali. *Queueing Systems: Theory and Applications*. Springer 95(1), pp. 145-171.

43. “The price of anarchy in loss systems,” Anily, S. and M. Haviv (2022), *Naval Research Logistics*, Vol. 69, pp. 689-701
44. “Stable matching of student groups to dormitories,” Perach N. and S. Anily, published online in *European Journal of Operational Research* (January 2022).

### **Working papers**

1. “The basic core of a parallel machine scheduling game”, Alon, T., and S. Anily (submitted for publication)

### **Chapters in Books**

1. “Vehicle Routing and Supply Chain”, (1998) Anily S. and J. Bramel, in Quantitative Methods in Supply Chain Management edited by S. Tayur, M. Magazine and R. Ganeshan, KLUWER