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***CURRENT INTERESTS, EXPERIENCE AND ACTIVITIES***

My career is a successful merger of the academic, business and consulting worlds. Conceptually, I am a problem solver, strategic planner and thinker, a system architect and implementer, and a health and pension actuary. I am an information systems emeritus full professor, an accomplished system designer and project manager, an independent actuary who specializes in health and pension insurance planning at the corporate level, as well as a CPA, a financial consultant, and a strategic planner and modeler.

Key educational accomplishments include education and curriculum development, mostly on information management issues such as compliance and technology audit, business intelligence and data mining, and health informatics. I was responsible for the development of graduate certificate programs in business intelligence and in risk management, and their partnership with the business community. My research interests are on health information analysis using data mining techniques, public health and health information systems. I was a department head and an associate dean at my school, the designer and implementer of most of our college information technology programs at the undergraduate, master, and Ph.D. levels, and the founder and director of a Center for Research in Information Management.

I worked in senior positions for insurance companies, a major pension fund, and Arthur Andersen. I did much consulting and modeling work, much of it at the executive level as well as the level of senior government officials. I was for ten years the consulting actuary on Israeli vehicles bodily-injury coverage to the compulsory no-fault insurance statistical agent. I provided the Israeli Commissioner of Capital Markets, Insurance and Savings with audit services of pension funds and institutional organizations, and guidance and advice regarding regulation and control methodologies for the management of information technology by large financial institutions, including insurance companies, pension funds and investment organizations.

Currently, in addition to my academic, research and business activities and interests, I am the health actuary of an HMO; a consulting actuary to Israeli corporations and to the Israeli Commissioner of Capital Markets, Insurance and Savings; an associate editor of the International Actuarial Association ASTIN Bulletin; the Secretary and Treasurer of the International Actuarial Association Health Section; and a Board member of the Jerusalem Business Ethics Center.

## ***EDUCATION***

**C.P.A.**, 1981

**Ph.D.**, Operations Research, Cornell University, 1973

**M.S.**, Operations Research, Cornell University, 1972

**FILAA**, Fellow of the Israeli Association of Actuaries

**Actuarial Diploma (Univ. of Michigan M.A. equivalent)**, Hebrew University, Jerusalem, 1968

**B.Sc.**, Mathematics, Hebrew University, Jerusalem, 1965

## ***ACADEMIC EXPERIENCE***

### **College of Business Administration, University of Illinois at Chicago, 1981 to the 2008**

Professor of Information Systems, founder and former Director of the Center for Research in Information Management (CRIM), former interim head of the Department of Information and Decision Sciences (IDS) and Acting Associate Dean. Was instrumental in the development of the Management Information Systems (MIS) program of the College at all academic levels, from undergraduate through the MBA and specialized M.S. in MIS to the Ph.D., as well as the joint MBA/Health Informatics program. Responsible for the development of new graduate certificate programs and their partnership with the Chicagoland business community. Emeritus Professor since July 2008.

### **Recanatti Graduate School of Management, Tel-Aviv University, 1995 to 1998**

Visiting Professor of Insurance, Head of the Insurance Studies tract of the school, and Head of the Erhard Insurance Research Center

### **Graduate School of Business, University of Chicago, Illinois, 1973 to 1977**

Assistant Professor of Management and Information Sciences, responsible for development and teaching of various courses in information systems and management sciences.

## ***PROFESSIONAL EXPERIENCE***

### **Consulting –Actuarial, Management and Information Systems, 1995 to the present**

Provided actuarial, management, strategic planning and systems consulting, emphasizing life, health and pension insurance. Among my projects:

- Major participant in the compulsory vehicle insurance revolution in Israel since the beginning of the century and up to April 2010, and the Israeli actuary of the Compulsory No-Fault Bodily Injury Insurance Database for ISO Israel Ltd. and ISO, Inc. of New-Jersey
- Health actuary of a large Israeli HMO
- Development of an audit program of actuarial work in an insurance company
- Cost team actuary in the California Health Benefits Review Program (CHBRP)
- Consulting to the Israeli Commissioner of Capital Market, Insurance and Savings on many issues, including regulation and auditing of pension funds, insurance companies, and reinsurance contracts

- Strategic planning for the move of a large Israeli HMO from legacy to modern information management
- Major participant in the pension reform in Israel in the middle to late nineties, including actuarial auditing of the major Israeli pension funds, for the Commissioner of Insurance
- IAS 19 / IFRS benefits evaluations
- Long Term Care actuarial evaluations for two of the three leading Israeli HMOs
- Pension and benefits evaluation and design for early retirees of the Bezeq Israeli Telephone Co., Inc.
- Benefits assessment for Amdocs, Inc.
- Strategic planning, systems advice, and special actuarial evaluations to many Israeli insurance companies

Among my clients:

AIG Golden Insurance Company	Insurance Services Office, New-York
Amdocs, Inc.	ISO Israel, Ltd.
Ararat Insurance Company	Klal Insurance Company
Avner Re-insurance company	Kupat Holim Macabi, a health and long-term care provider
Bank Yahav, Ltd.	Kupat Holim Meuhedet, a health and long-term care provider
Bezeq, Inc.	La-Nationale Insurance Company
Central Service Organization of the Israeli Local Governments Association	Maariv, a leading Israeli newspaper
Commissioner of Insurance, the Israeli Treasury	Migdal Insurance Company,
Dolev Insurance Company	Mivtahim Social Insurance Corporation
Granit Human Resources Planning and Services	Various works for lawyers and accountants

#### **Corporate Information Services, Transamerica Occidental Life Insurance Co., 1994 to 1995**

Internal consultant, with concentration on strategic insurance developments and insurance through the web issues.

#### **Consulting - Systems Design, Implementation and Audit, and Financial and Actuarial Consulting, 1981 to 1994**

Some illustrative projects:

- Developed and implemented international tax optimization systems for Beatrice Food Co.
- Optimized many bond refinancing deals for Van Kampen Merritt Inc.
- Performed information technology and data processing audits for the Israeli Bank Leumi for many years
- Developed and installed a wholesale diamond management system for Chas. E. Engelhart, Inc.
- Developed a new pension fund, including actuarial, legal, and business plan, for the Israeli Bank Yahav
- Provided strategic planning for the Foster & Powell Group.

Among my clients:

Arthur Andersen & Co.  
Bank Leumi B.M.  
Bank Yahav  
Beatrice Food Company

CAN Insurance Company  
The FBI  
Van Kampen Merritt Inc.

### **Arthur Andersen & Co., 1977 to 1980**

As an experienced manager, participated in technical design of a major online Accounting and Financial Control and Reporting system. Product manager responsible for design, development, and support of a Wage and Price Compliance Control and Planning software, Statistical Sampling and Evaluation package for auditors, and Medicare and Medicaid Reimbursement system for Social Security Administration reporting.

### **Consulting - Software Design and Implementation, Financial and Actuarial, 1968 to 1977**

Developed complete systems from design to implementation, including:

- Life insurance portfolio management program for Shiloah Insurance Co.
- Local bond refinancing solution for Paul D. Speer and Associates
- Claim systems for Acceleration Insurance Co. and Kanawha Insurance Co.
- Information technology assessment for Inland Steel Co.

### **Massachusetts Mutual Life Insurance, Springfield, Massachusetts, 1969 to 1973**

Developed financial analysis planning system for the actuarial and investment groups, as well as a REIT evaluation system.

### **Mivtahim Social Insurance Co., Tel-Aviv, Israel, 1966 to 1969**

Actuary of the largest collective pension fund in Israel. Actuarial evaluations and negotiations, with some of the largest employers in Israel. Developed one of the earliest pension payment systems.

## ***PUBLICATIONS***

1. "Ethical and Legal Issues of Privacy and Patient Rights in Information Healthcare Delivery Systems," with A. Lubitch, International Journal of Healthcare Technology and Management, Forthcoming.
2. "Balancing Influence between Actors in Healthcare Decision Making," with R.M. Kaplan, Forthcoming.
3. "Risk Adjustment Global Perspectives: United Kingdom, Israel, the Netherlands, Taiwan, Chile, South Africa," with M. Bardsley, B. Childs, C. Ghiselli, A. McClure, and S. Mateja, Contingencies, 1-2/2011, 40-49.
4. "Health Care reform – Learning from Others; How Can the U.S. Benefit from Israel's Recent Experience Shifting to a Universal Health Care System?" J. Bertko in conversation with Y. Babad, Contingencies, 5-6/2009, 40-43.
5. "Two-Level Model of Customer Retention in U. S. Mobile Telecommunication Service Market," with C. Ranganathan and D. Seo, Telecommunications Policy, Vol. 32, issues 3-4, April-May 2008, pp. 182-196.

6. "Switching Behavior of Mobile Users: Do Users' Relational Investment and Demographics Matter," with C. Ranganathan and D. Seo, *European Journal of Information Systems*, 2006, 15, 269-276.
7. "Process for Using Smart Card Technology in Patient Prescriptions, Medical / Dental / DME Services Processing, and Healthcare Management," with J. F. Denman, Patent Application Publication, US 2006/0020007 A1, Jan. 2006.
8. "Unified Healthcare Management System and Method," with J. F. Denman, World Intellectual Property Organization, International Application No. PCT/IL2005/000378, July 2005.
9. "Healthcare Reform Implementation: Stakeholders and Their Roles - the Israeli Experience," with T. Horev, *Health Policy*, 2005, 71(1), 1-21.
10. "Matchmaking Software Agents in B2B Markets" with A. Ouksel and T. Tesch, Proc. of the 37th Annual Hawaii International Conference on System Sciences, 2004.
11. "Evolution of a Healthcare Reform – the Israeli Experience," with T. Horev and S. Shvarts, *International Journal of Healthcare Technology and Management*, Vol. 5 No. 6, 2003, pp. 463-473; and in *Hospital of the Future – 2<sup>nd</sup> International Conference on the Management of Healthcare and Medical Technology*, Chicago, July, 2002.
12. "The Israeli Healthcare System – from Health Funds to a National Health Insurance Law," With T. Horev, 27<sup>th</sup> International Congress of Actuaries, Cancun, Mexico, March, 2002.
13. "Health Products and Coverage in Israel - Policy and Implications," with E. Comisarenko, the ASTIN 2000 Colloquium, Fall 2000, Technical Management of Health Insurance.
14. "Enhancing Data Warehouse Performance through Query Caching," with A. N. Saharia, *Database*, 2000.
15. "Enhancing Database Performance in a DSS Environment via Query Caching," with A. N. Saharia, the Association of Information Systems 1997 American Conference, August, 1997.
16. "Comparison of Health and Long-Term Care Israeli Insurance Programs," the Erhard Insurance Research Center, Recanatti Graduate School of Business Administration, Tel-Aviv University, 1996.
17. "An Actualized, Recursive Interval Approach for the Determination of a Bonus-Malus System," with B. Berliner, the 6th AFIR International Colloquium, Copenhagen, Fall 1996.
18. "Application of Intervals of Possibilities to Solvency," with B. Berliner, the XXV International Congress of Actuaries, Brussels, Fall, 1995.
19. "Reduction of Uncertainty through Actualization of Intervals of Possibilities and Its Application to Reinsurance," with B. Berliner, the 5th AFIR International Colloquium, Brussels, Fall, 1995.
20. "An Appointment-Based Service Center with Guaranteed Service," with M. Dada and A. N. Saharia, the *European Journal of Operations Research*, Special Issue on Congestion, 1996.
21. "On the Applicability and Advantages of Using Intervals of Possibilities to Determine the Solvency of the Insurer," with B. Berliner, the International Conference on Insurance Solvency and Finance, Philadelphia, April 1994.
22. "The Use of Intervals of Possibilities to Measure and Evaluate Financial Risk and Uncertainty," with B. Berliner, the 4th AFIR Colloquium, April 1994.
23. "Cost Driver Optimization in Activity-Based Costing," with B. V. Balachandran, *The Accounting Review*, Vol. 68 No. 3, July 1993, pp. 563-575.
24. "Use of Stale Information for Database Applications," with A. N. Saharia, *ICIS*, December, 1992.

25. "Adaptive Post-Processing of OCR Text via Knowledge Acquisition," with L. M. Liu, W. Sun and K. K. Chan, the ACM 1991 Computer Science Conference.
26. "Successful Implementation of Expert Systems in Large Organizations," with P. Alpar, *Expert Systems with Applications*, Vol. 1, 1990, pp. 189-191.
27. "Operational Matrix Accounting," with B. V. Balachandran, *Contemporary Accounting Research*, Vol. 5, No. 2, Spring 1989, pp. 775-792.
28. "The Roles of the CPA and EDP Auditor", *Journal of the Israeli EDP Auditors Association*, October 1988, pp. 33-42.
29. "Guidelines and Standards for Accounting Graphics," with I. M. Jarett, *Journal of Accounting and EDP*, Summer 1988, pp. 4-14.
30. "Financial Graphics Standards: A Myth or Reality," with I. M. Jarett, in Financial Graphics -- Communications for the 1990's, published by the Illinois CPA Society, 1988.
31. "Financial Graphics Standards: Survey of Financial Annual Reports and Analysis of Results," with I. M. Jarett, in Financial Graphics -- Communications for the 1990's, published by the Illinois CPA Society, 1988.
32. "Criteria for Selecting Accounting Software: Part III," with K. M. Cullen, *Journal of Accounting and EDP*, Vol. 2, No. 1, Spring 1986, pp. 35-44 (last in a sequence of three articles).
33. "Criteria for Selecting Accounting Software: Part II," with K. M. Cullen, *Journal of Accounting EDP*, Vol. 1 No. 4, Winter, 1986, pp. 23-30 (part II of a sequence of three articles).
34. "Safeguarding Your Data and Installation," with K. M. Cullen, *System 3X World*, December, 1985, pp. 32-38.
35. "Criteria for Selecting Accounting Software: Part I," with K. M. Cullen, *Journal of Accounting and EDP*, Vol. 1, No. 3, fall, 1985, pp. 19-26 (part I of a sequence of three articles).
36. "Even No Data Has a Value," with J. A. Hoffer, *Communications of the Association for Computing Machinery*, August, 1984, pp. 748-756.
37. "Security Controls in Distributed Data Bases," with J. A. Hoffer, *Operations Research*, January, 1984, pp. 23-40.
38. "Pricing Models for a Computer Center," *Operations Research*, January, 1981, pp. 75-94.
39. "Data Element Security and its Effects on File Segmentation" with J. A. Hoffer, *IEEE Trans. on Software Engineering*, Vol. SE-6, No. 5, September, 1980, pp. 402-410.
40. "Optimization of the Arbitrage Process in Advance Refunding of Municipal Bonds," with P. D. Speer, Jr., *Management Science*, Vol. 24, No. 10, June, 1978, pp. 987-1000.
41. "A Record and File Partitioning Model," *Communications of the Association for Computing Machinery*, Vol. 20, No. 1, January, 1977, pp. 22-30.
42. "Management of Program Storage in Computers," with B. V. Balachandran and E. A. Stohr, *Management Science*, Vol. 23, No. 4, December, 1976, pp. 380-390.
43. "Joining Policies in Multipriority, Multiclass Batch Computer System," with M. Modiano, *Communications of the Association for Computing Machinery*, Vol.10, No. 3, March, 1976, pp. 127-136.
44. "A New Look at Process-Oriented Simulation Languages," with L. Schrage, *Proceedings of the 1975 Winter Computer Simulation Conference*, December, 1975, pp. 31-33.
45. "Effects of Different GPSS Random Number Generators on Simulation Results," with E. A. Stohr, *Simuletter*, Vol. 6, No. 4, July, 1975, pp. 55-61.

46. "The Monetary System-Implementation and Experience: A Case Study," Proceedings of the Implementation of Computer-Based Decision Aids Conference, MIT, April, 1975.
47. "A Generalized Multi-Entrance Time Sharing Priority Queue," Journal of the Association for Computing Machinery, Vol. 22, No.2, April, 1975, pp. 231-247.
48. "Cost Evaluation of Storage Schemes," with B. V. Balachandran and E. A. Stohr, Proceeding of the Association for Computing Machinery Annual Conference, November, 1974, pp. 54-60.
49. "Portfolio Choice, the Horizon Problem and the Investment Opportunity Set," with J.L. Bicksler and A. Barnea, American Economic Review, May, 1973, pp. 140-144.

### ***MANUSCRIPTS AND WORKING PAPERS***

50. "Agent-Based Regulation Mechanisms in B2B Exchange," with A. Ouksel and T. Tesch, under review
51. "Collective Pension Fund Auditing Guides and Checklists," manuscript, 1996.
52. "Consumer Guide to the Selection of Health and Long-Term Care," manuscript with S. Bromli and R. Gross, the Brukdale Institute and the Erhard Insurance Research Center, Recanatti Graduate School of Business Administration, Tel-Aviv University, 1996.
53. "A Transient Analysis of an Appointment System with Guaranteed Waiting Time," with M. Dada and A. N. Saharia, Working Paper number 95-1, the Center for Research in Information Management, the University of Illinois at Chicago, March, 1995.
54. "Real-Time Auditing - Concepts and Reality," with S. Petravick and B. V. Balachandran, submitted to Auditing: A Journal of Practice and Theory, 1994.
55. "University-Industry Alliance: Past, Present and Future," with S. L. Reeves and R. E. Vyhmeister, Working Paper number 92-10, the Center for Research in Information Management, the University of Illinois at Chicago, December, 1992.
56. "The MIS-Education Gap," with S. Reeves, Working Paper number 90-1, the Center for Research in Information Management, the University of Illinois at Chicago, February, 1990.
57. "MIS Faces the Nineties," with S. Reeves, Working Paper number 89-6, the Center for Research in Information Management, the University of Illinois at Chicago, November, 1989.
58. "Insurance Aspects of Computer Backup Facilities," Working Paper number 89-2, the Center for Research in Information Management, the University of Illinois at Chicago, March, 1989.
59. "Audit and EDP Audit -- Prospects and Concerns: The Auditing of the Next Era," keynote address, delivered at the Third European Conference on Computer Audit, Control and Security, Tel-Aviv, Israel, November, 1988.
60. Micro-Computer Security, with K. M. Cullen and W. Kenny, published by the Illinois CPA Society, January, 1986.
61. Selecting Accounting Software, with K. M. Cullen, published by the Illinois CPA Society, October, 1985.
62. Business Software Selection, with K. M. Cullen, manuscript, July, 1985.
63. "Accounting Support System for Financial Reporting and Decision Making," with B. V. Balachandran, July, 1982.
64. "Security Control in Information Systems," with J. A. Hoffer and L. Schrage. Manuscript, 1975.

65. "The Effects of Advance refunding with Taxable Municipal Bonds," with P. D. Speer, Jr., Manuscript, July, 1976.
66. "Sorting Performance with Randomness," Report No. 7611, Center for Mathematical Studies in Business and Economics, University of Chicago, February, 1976.
67. "The IBM GPSS Random Number Generator," Report No. 7513, Center for Mathematical Studies in Business and Economics, University of Chicago, March, 1975.
68. "A Finite Capacity Round-Robin Queue," Report 7504, Center for Mathematical Studies in Business and Economics, University of Chicago, January, 1975.
69. Price Scheduling in a time Sharing Queueing System, Technical Report No. TR73-178, Department of Computer Science, Cornell University, 1973.

## **YAIR M. BABAD, PHD, CPA ,FILAA**

Professor Yair Babad is an independent full member of the Israeli Actuarial Association, A U.S. CPA, and a Full Professor Emeritus of the College of Business Administration of the University of Illinois, Chicago. He was born in Israel, served in the Israeli army, and received a B.Sc. in Mathematics and Diploma in Actuarial Studies from the Hebrew University in Jerusalem. After working as a pension fund and life insurance actuary for four years, he came in 1969 to Cornell University to pursue a Ph.D. in Operations Research. In 1973 he joined the faculty of the Graduate School of Business at the University of Chicago. In 1977 joined Arthur Andersen & Co. as a senior software development manager.

From 1981 until 2008 he was a Professor of Information Systems in the College of Business Administration at the University of Illinois at Chicago, where he continues to serve as an Emeritus Professor. He was the founding director of the Center for Research in Information Management, department head, and an associate dean. From mid-1995 until 1998 he was in Israel, where he established an actuarial consulting practice, was a visiting professor, Director of the Erhard Insurance Research Center, and the Head of the Insurance Program at the Recanatti Graduate School of Management of Tel-Aviv University.

Professor Babad's career is a successful merger of the academic, research, business and consulting worlds, as a problem solver, strategic planner and thinker, a system architect and implementer, and a health and pension actuary. Professor Babad has published many articles in leading journals. Currently he is the health actuary of an Israeli HMO; a consulting actuary to Israeli corporations and to the Israeli Commissioner of Capital Markets, Insurance and Savings; the Treasurer and Secretary of the International Actuarial Association Health Section; an Associate Editor of the International Actuarial Association ASTIN Bulletin; and a Board member of the Jerusalem Business Ethics Center.