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ERIC WOLMAN

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EDUCATION

Ph.D., Applied Mathematics, HARVARD, 1957
A.B., Mathematics, HARVARD, 1953
NCI-sponsored 1-week course on Histopathobiology of Cancer, 1990
Continuing education in management and technology at BELL LABS

EXPERIENCE

GEORGE MASON UNIVERSITY

1996- **Visiting Research Professor,** then **Affiliate Professor**, Dept. of Systems Engineering & Operations Research.

WAYNE STATE UNIVERSITY SCHOOL OF MEDICINE

1992-96 **Faculty**, Dept. of Internal Medicine & Graduate Program in Cancer Biology. Research on cancer-screening policy; taught Cancer Control.

MEYER L. PRENTIS COMPREHENSIVE CANCER CENTER OF METROPOLITAN DETROIT

1990-94 **Assistant Leader, Cancer Prevention & Control Program** and Member, Operating Committee of the Cancer Center.

MICHIGAN CANCER FOUNDATION, an independent non-profit cancer research and service institute (now the KARMANOS CANCER INSTITUTE).

1990-91 **Vice President for Community Research**. Coordinated research on prevention, detection, care, follow-up, and rehabilitation in the COMPREHENSIVE CANCER CENTER. Quantitative modeling of patients' behavior and policy research on cancer screening.

1988-90 **VP for Community Programs**. Managed research and service in cancer prevention, detection, and care: home-care and rehabilitation nursing, hospice service, support services for patients and caregivers, breast cancer screening, Cancer Information Service, and cancer education outreach.

AT&T BELL LABORATORIES

1983-87 **Department Head, Human Performance Engineering**. Established UNIX® Operating System documentation department. Developed computer aids to text criticism and to the teaching of English.

1977-82 **Dept. Head, Operations Research Techniques & Advanced Computing Systems.** Developed software tools for approximate analysis of traffic networks. Established research effort in database management.

1968-77 **Dept. Head, Traffic Research & Network Engineering.** Promulgated Bell System trunk-network provisioning rules. Co-invented a simple method of traffic administration for unattended switching systems. Prevented exclusion of $730 million from Bell System rate base by writing Federal Communications Commission testimony rebutting accusation that long-distance service was too good at the ratepayers' expense.

1966-68 **Dept. Head, Traffic Systems Analysis.** Managed human-factors field studies of new services; initiated effort that improved coin-telephone instruction cards.

1957-66 **Member of Technical Staff & Supervisor.** Performed traffic analyses of data communications and computer systems.

TEACHING

1993 WAYNE STATE UNIVERSITY SCHOOL OF MEDICINE: Organized and gave new course on Cancer Control in PhD Program in Cancer Biology.

1966-77 BELL LABS: Lectured in internal courses on telecommunications traffic and networks.

1964 HARVARD: Visiting Lecturer on Applied Mathematics. Designed and taught new course on Traffic and Queues.

PUBLICATIONS - Refereed

Dawson CS, McCallum CJ Jr, Murphy RB, Wolman E. 2000. Operations Research at Bell Laboratories through the 1970s: Part III. *Operations Research* **48**:517-526.

Dawson CS, McCallum CJ Jr, Murphy RB, Wolman E. 2000. Operations Research at Bell Laboratories through the 1970s: Part II. *Operations Research* **48**:351-361.

Dawson CS, McCallum CJ Jr, Murphy RB, Wolman E. 2000. Operations Research at Bell Laboratories through the 1970s: Part I. *Operations Research* **48**:205-215.

Yood MU, Johnson CC, Blount A, Abrams J, Wolman E, McCarthy BD, Raju U, Nathanson DS, Worsham M, Wolman SR. 1999. Race and Differences in Breast Cancer Survival in a Managed Care Population. *J Natl Cancer Inst* **91**:1487-1491.

Chapman J-AW, Wolman E, Wolman SR, Remvikos Y, Shackney S, Axelrod DE, Baisch H, Christensen IJ, White RA, Liebovitch LS, Moore DH, Waldman FM, Cornelisse CJ, Shankey TV. 1998. Assessing Genetic Markers of Tumour Progression in the Context of Intratumour Heterogeneity. *Cytometry* **31**:67-73.

Wolman SR, Heppner GH, Wolman E. 1997. New Directions in Breast Cancer Research. *FASEB J* **11**:535-543.

Wolman E. 1994. Where Are the Non-visiting Patients? *Medical Decision Making* **14**:345-356.

Gershwin SB, Laue RV, Wolman E. 1974. Peak-Load Traffic Administration of a Rural Multiplexer with Concentration. *Bell Sys Tech J* **53**:261-281.

Wolman E. 1972. The Camp-On Problem for Multiple-Address Traffic. *Bell Sys Tech J* **51**:1363-1422.

---. 1965. On Definitions of Congestion in Communication Networks. *Bell Sys Tech J* **44**:2271-2294.

---. 1965. A Fixed Optimum Cell-Size for Records of Various Lengths. *J Assoc Computing Machinery* **12**:53-70.

Morris R, Wolman E. 1961. A Note on `Statistical Equilibrium.' *Operations Research* **9**:751-753.

- Other

Wolman SR, Sell S, Wolman E. 1997. Cancer Markers and Cytogenetics. In: Wolman SR, Sell S, eds. *Cytogenetic Markers of Human Cancer*. Totowa, NJ: Humana Press.

Wolman E. 1977. Traffic. In *Engineering and Operations in the Bell System*, Sec. 14.1-14.4: Cost versus Quality of Service; Setting Objectives; What Is Traffic?; Trunking; 473-490 (unsigned). Holmdel, NJ: Bell Laboratories.

---. 1976. Network Utilization. FCC Docket 19129, Phase II, Brief and Exceptions of Bell System Respondents, 102-109 (unsigned).

---. 1975. Rebuttal Testimony of Richard R. Hough on Utilization Efficiency of Intertoll Network, Parts I and II. FCC Docket 19129, Phase II, Bell Exhibit 180-A, Tab B, 1-93 (unsigned).

---. 1969. Operations Research and Urban Fire Problems. *Fire Technology* **5**:346-350.

---. 1969. Additional Notes. In Khintchine AY, *Mathematical Methods in the Theory of Queueing*, 2/e, 121-4. London: Griffin.

Also many AT&T internal technical reports, mostly on telecommunications traffic theory and engineering and their history. (There were many publications by subordinates on the work supervised from 1966 to 1987, but at BELL LABS a manager was never a co-author unless also a major contributor at the working level.)

GRANTS FUNDED

An Innovative Breast Cancer Screening Program for Low-Income Black Women Conducted by the Michigan Cancer Foundation.
Herrick Foundation, 9/90 - 8/91, $5000.

A Low-Cost Program of Speech Rehabilitation for Laryngectomees.
Gannett Foundation, 8/90 - 7/91, $5000.

PROFESSIONAL SOCIETIES

INSTITUTE FOR OPERATIONS RESEARCH AND THE MANAGEMENT SCIENCES (formerly OPERATIONS RESEARCH SOCIETY OF AMERICA), 1976- (Fellow)
Awarded Kimball Medal, 2013
Forum for Women in OR/MS: Co-Treasurer, 2002-11 and 2000
Professional Recognition Committee: Chair, 1992-2000 and 1981-82
Health Applications Section: Council, 1993-96 and 1990-92
Council, 1979-82
Executive Committee, 1980-82
Nominating Committee, 1987 and 1982
Invited Speaker on career issues at Doctoral Colloquium, 1996, 1989, 1987, and 1986

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, 1963- (Fellow)
AMERICAN PUBLIC HEALTH ASSOCIATION, 1990-2004
SOCIETY FOR INDUSTRIAL AND APPLIED MATHEMATICS, 1962-89
Trustee, 1978-82
Chairman of the Board, 1981-82
Executive Committee, 1979-82
Council, 1969-74
Editorial Board, *SIAM Journal on Applied Mathematics*, 1965-72
ASSOCIATION FOR COMPUTING MACHINERY, 1977-89
Special Interest Group on Management of Data:
Nominating Committee, 1983
AMERICAN MATHEMATICAL SOCIETY, 1957-82
INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS, 1957-76
SIGMA XI, 1955-
PHI BETA KAPPA, 1953-

PROFESSIONAL ACTIVITIES

MCF SERVICES, INC: Professional Advisory Committee, 1990-94
NATIONAL SCIENCE FOUNDATION:
Working Group on Information Technology, 1980-81
NATIONAL BUREAU OF STANDARDS (now NIST): Evaluation Panels
- for National Engineering Laboratory, 1978-80
- for Institute for Applied Technology, 1974-78
- for Fire Programs, 1971-74

NATIONAL ACADEMY OF SCIENCES - NATIONAL RESEARCH COUNCIL
Committee on Fire Research, 1966-70
NAVAL POSTGRADUATE SCHOOL: Operations Research/Systems Analysis Program,
External Review Committee, 1978
INTERNATIONAL TELETRAFFIC CONGRESS:
Program Committee, 1976 (Melbourne) and 1967 (New York)
BELL LABS Computer Science Curriculum Committee, 1978-81
Bell System Technical Journal editorial committee: alternate member, 1972-77
Ph.D. recruiter for BELL LABS in applied mechanics at Harvard, 1960-70

TRUSTEESHIPS and FUND-RAISING

SEA EDUCATION ASSOCIATION: TRUSTEE EMERITUS, 2017-; Overseer, 1981-
Trustee, 1998-2004, 1990-96, and 1982-89
Chair, Education Committee, 1993-2004
Chair, Long-Range Planning Committee, 1984-92
RUMSON COUNTRY DAY SCHOOL: Trustee, 1973-81
Chair, Education Committee, 1974-81
HARVARD Campaign in Central New Jersey: Vice Chair, 1982
PLANNED PARENTHOOD OF MONMOUTH COUNTY:
Special Appeals Committee, 1979-82

INVITED TECHNICAL TALKS

"Screening for Disease: When Is It a Bad Idea?"
WASHINGTON, DC CHAPTER OF INFORMS, 3/06
GEORGE MASON UNIVERSITY, Dept. of Systems Engineering & Operations Research, 9/04

"Criteria for a Screening Program, and Why Meeting Them Is Controversial"
CORS/INFORMS, session on Screening for Cancer and Other Diseases–Where Does It Stand?, Joint Meeting, 5/04

"Mammographic Screening of Women in Their Forties: Why Can't We Agree on a Policy?"
INFORMS, sessions on Breast Cancer, National Meeting, 11/01, and on Health Care Management, Spring National Meeting, 4/98
KARMANOS CANCER INSTITUTE, Breast Program, and WAYNE STATE UNIVERSITY SCHOOL OF MEDICINE, Division of Hematology/Oncology, 12/97
GEORGE MASON UNIVERSITY, Dept. of Operations Research & Engineering, and Institute for Public Policy, 9/97

"The Data and Their Interpreter"
INSTITUTE FOR OPERATIONS RESEARCH & THE MANAGEMENT SCIENCES, Doctoral Colloquium, 11/96

"Constructing a Probability Model of Surprising Data: Have Non-Returning Patients Really Abandoned Their Customary Clinics?"
NATIONAL CANCER INSTITUTE, Division of Cancer Prevention & Control, 4/95
GEORGE MASON UNIVERSITY, Dept. of Operations Research & Engineering, 3/95

"The Scientific Context of Feuer's Statistical Model of Breast Cancer Incidence"
OPERATIONS RESEARCH SOCIETY OF AMERICA, session on Modeling & Interpretation of Trends in Breast Cancer Incidence, ORSA/TIMS Joint National Meeting,10/94

"Where Are the Non-visiting Patients?"
OPERATIONS RESEARCH SOCIETY OF AMERICA, session on Decision Aids in Health Systems Planning, ORSA/TIMS Joint National Meeting, 11/92

"Objectivity in Professional Life, with Examples from Cancer Policy"
UNIVERSITY OF NEW HAMPSHIRE, Department of Health Management & Policy, 1/92

"Controlled Clinical Trials to Increase Early Detection of Curable Cancers: Issues in Design, Implementation, and Interpretation"
FLORIDA ATLANTIC UNIVERSITY, Sigma Xi Chapter, 9/90

"The Weber Dip: A Cautionary Tale in R&D Management"
WAYNE STATE UNIVERSITY, Department of Industrial Engineering, 4/90
UNIVERSITY OF MICHIGAN, Department of Industrial and Operations Engineering, 4/90
MIT, Operations Research Center, 3/90
SUNY AT STONY BROOK, School for Management & Policy, 12/87

and on traffic and operations research topics between 1965 and 1978 at

GEORGIA INSTITUTE OF TECHNOLOGY
HARVARD
JOHNS HOPKINS
MATHEMATICAL ASSOCIATION OF AMERICA
MICHIGAN STATE UNIVERSITY
NATIONAL FIRE PROTECTION ASSOCIATION
NAVAL POSTGRADUATE SCHOOL
OPERATIONS RESEARCH SOCIETY OF AMERICA
SUNY AT STONY BROOK
STEVENS INSTITUTE OF TECHNOLOGY
UNIVERSITY OF CALIFORNIA AT BERKELEY
UNIVERSITY OF NORTH CAROLINA