CURRICULUM VITAE

EDWARD L. MELNICK

Professor of Statistics
Stern School of Business
New York University

BIOGRAPHICAL INFORMATION

Marital Status:	Married, 2 children
Home Address:	70 East 10th Street, Apt. 11B New York, NY 10003 (212) 677-2198
Office Address:	New York University Stern School of Business 44 West Fourth Street, Suite 8-56 New York, NY 10012 TEL: (212) 998-0444 FAX: (212) 995-4003

ACADEMIC DEGREES

Doctor of Philosophy, (1970), George Washington University - (Mathematical Statistics)
  Dissertation: An Information Theoretic Approach for Analyzing Time Series Models
  Advisor: Solomon Kullback
Master of Science, (1963), Virginia Polytechnic Institute - (Mathematics and Statistics)
  Thesis: Moments of Ranked Poisson Variates. (Results summarized in <u>Order Statistics</u> by H.A. David, published by J. Wiley and Sons, 1970, pp. 36-9)
  Advisor: John G. Saw
Bachelor of Arts, (1960) Lehigh University - (Industrial Psychology)

ACADEMIC AFFILIATIONS

1969-Present	New York University, Statistics/Operations Research
1976-1977	Imperial College, Department of Mathematics, London, England
1964-1969	U.S. Department of Agriculture Graduate School

GOVERNMENT AFFILIATIONS

1964-1969	Statistical Research Division, U.S. Census Bureau, Mathematical Statistician
1963-1964	Statistical Methods Division, U.S. Census Bureau, Mathematical Statistician

EDITORSHIP

Editor Journal of Bioterrorism & Biodefense

Associate Editor of the Journal of Forecasting (1989-Present)

Co-Editor and Chief for Encyclopedia on Quantitative Risk Analysis and Assessment (2008)

Section Editor for the Homeland Security Section of the Encyclopedia on Quantitative Risk Assessment and Analysis (2008)

MEMBER OF PROFESSIONAL ASSOCIATIONS

1961 - American Statistical Association
1968 - Royal Statistical Society
1990 - International Institute of Forecasters
2009 - Project Oversight Group (Research committee of the Society of Actuaries – membership by invitation) 2009-2015

HONORS

Elected Fellow of the Royal Statistical Society
Elected Fellow of the American Statistical Association
Invited Member of the Project Oversight Group (POG) of the Society of Actuaries – the research branch of the Society of Actuaries
Elected Member of the Institute of International Statistics

Chairman, Department of Statistics and Operations Research, 1995 – 2002
Deputy Chairman of IOMS (Information Operations and Management Science), 2014 – present

Chairman, Risk Analysis Section of the American Statistical Association, 2003 – 2004
Chairman, Statistics in Defense and National Security of the American Statistical Association, 2015 - 2016
Executive Committee Member of the Risk Section of the ISI 2012 - present

TEACHING AWARDS

1. 1983 Faculty Member of the Year: Gallatin Division.
2. 1988 Excellence in Teaching Award: Stern School of Business.
3. 1989 Excellence in Teaching Award (first recipient): Executive MBA Program in Finance at the Stern School of Business.
4. 1990 Excellence in Teaching Award: Executive MBA Program in Finance at the Stern School of Business.
5. 1993 Excellence in Teaching Award: Executive MBA Program in Finance at the Stern School of Business.
6. 1994 Excellence in Teaching Award: Executive MBA Program in Finance at the Stern School of Business.
7. **1995 New York University Distinguished Teaching Award**
8. 1996 Excellence in Teaching Award: Executive MBA Program in Finance at the Stern School of Business.
9. 1998 Excellence in Teaching Award: Executive MBA Program in Finance at the Stern School of Business.
10. 1999 Excellence in Teaching Award: Executive MBA Program in Finance at the Stern School of Business.
11. 2000 Excellence in Teaching Award: Executive MBA Program in Finance at the Stern School of Business.
12. 2002 Excellence in Teaching Award: Executive MBA Program in Finance at the Stern School of Business.
13. 2003 Excellence in Teaching Award: Executive MBA Program in Finance at the Stern School of Business
14. 2004 Excellence in Teaching Award: Executive MBA Program in Finance at the Stern School of Business.
15. 2005 Excellence in Teaching Award: Executive MBA Program in Finance at the Stern School of Business.
16. 2006 Excellence in Teaching Award: Executive MBA Program in Finance at the Stern School of Business.

PUBLICATIONS

A. Publications

"Comparison of Model III and a Parametric Method in Estimating Coefficients from Artificially Created Time Series," U.S. Census Bureau paper, 1964.

"Some Quantitative Measures for the Analysis of Fertility Series," U.S. Census Bureau paper, 1967.

"Autocovariance Structure of the CPS Composite Estimator," U.S. Census Bureau paper, 1967.

"Using Order Statistics for Editing Data," U.S. Census Bureau paper, 1967.

"Autoregressive Models for Estimating Monthly Total Retail Sales Figures," U.S. Census Bureau paper, 1968.

"The Probability Distribution of Order Statistics from Discrete Populations," Decision Sciences, pp. 139-43, April 1972.

"An Application of the Minimum Discrimination Information Estimate for Detecting Gaussian Signals," IEEE Transactions on Information Theory, pp. 367-69, May 1973.

"An Application of the Minimum Discrimination Information Estimate to Compute Log-Likelihood Ratios," Journal of Applied Probability, pp. 469-74, June 1973 (with S. Kullback).

"Outlier Detection," New York Statistician, pp. 2-4, November-December 1973 (with George Wang).

"An Evaluation of Recent Federal Trade Commission Regulations under the Fair Packaging and Labeling Act (`Cents-Off' Representation)," Journal of Retailing, pp. 3-11, Summer 1974 (with F. Robert Shoaf).

"Filter Design for the Seasonal Adjustment of a Time Series," Communications in Statistics, pp. 1171-86, March 1974 (with John Moussourakis).

"Retail Grocers' Pricing Responses to Manufacturer Initiated Cents-Off Promotions," Journal of Consumer Affairs, pp. 76-85, Summer 1974 (with F. Robert Shoaf).

"Reducing Computational Roundoff Errors Efficiently," Computers and Operations Research, An International Journal, pp. 135-6, January 1974.

"Seasonal Adjustment for the Decision Maker," Decision Sciences, pp. 252-8, April 1975 (with John Moussourakis).

"A Mathematical Programming Formulation of Estimation Problems Related to Contingency Tables," Management Science, pp. 701-3, February 1976 with Uri Yechiali).

"An Application of the Simplex Method for Estimation Problems Related to Contingency Tables," Communications in Statistics, pp. 1121-32, December 1975 (with Uri Yechiali).

"Smoking History and Humoral Protease-Antiprotease: Determinants of Chronic Obstructive Pulmonary Disease (COPD)," American Review of Respiratory Disease, pp. 146, 1976 (with M. Galdston).

"A Time Series Model for Long-Term Financial Forecasting," in Understanding Capital Markets: The Financial Environment and the Flow of Funds in the Next Decade, edited by A. Sametz and P. Wachtel, D.C. Heath and Company, pp. 307-27, 1977.

"Comparison of Two Concepts of Social Performance as Related to Outcome in Acute and Chronic Schizophrenics," Behavioral Neuropsychology, pp. 6-12, January 1976 (with G. Serban and C. B. Gidynski).

"Multiple Regression and the Analysis of Variance," Journal of Advertising Research, pp. 27-31, June 1977 (with F. Robert Shoaf).

"Interactions of Neutral Elastase, Serum Trypsin Inhibitory Activity, and Smoking History as Risk Factors for Chronic Obstructive Pulmonary Disease in Patients with MM, MZ, and ZZ Phenotypes for Alpha-Antitrypsin," American Review of Respiratory Disease, pp. 452-53, November 1977 (with M. Galdston).

"Comparative Consumerism: An Analytical Approach," Contemporary Marketing Thought, pp. 507-9, 1977 (with L. J. Rosenberg).

"Moments of Ranked Discrete Variables with an Application to Independent Poisson Variates," Journal of Statistical Computation and Simulation, Vol. 12, pp. 51 - 59, 1980.

Motivation in Schizophrenics and Normals, Chapter 9, in Adjustment of Schizophrenics in the Community, by George Serban, Spectrum, SP Medical and Scientific Book Series. pp. 187-208, June 1980.

"A Test for Stationarity". Time Series Analysis, edited by O. D. Anderson and M. Ray Perryman, North Holland, pp. 365-73, 1981.

"Control of Errors in the Computation of Moments of Ranked Discrete Variables," SIAM Journal on Scientific and Statistical Computing, pp. 1-5, March 1982.

"Misspecifications of the Normal Distribution," American Statistician (with A. Tenenbein), pp. 72-3, August 1982.

"The Filtering of Transitory Noise in Earning Numbers," Journal of Forecasting (with Z. Lieber and J. Ronen), Vol. 2, pp. 331-350, 1983.

"Simultaneous Prediction Intervals for Multiple Forecasts," Technometrics (with N. Ravishanker and Y. Hochberg), Vol. 29,No. 3, pp. 371-376, August 1987.

"Consumer Protection Laws: Violator Detection and Enforcement Strategy," Management Science (with P. LaBarbera), pp. 1348-56, October 1987.

"Differential Geometry of ARMA Models," Journal of Time Series Analysis (with N. Ravishanker and C-L Tsai), pp. 259-74, 1990.

"Sample Survey Data: Quota Samples versus Probability Samples," Advances in Consumer Research (with R. Colombo and R. Tashjian), Vol. XVIII, pp. 576-582, 1991.

“Creating Value in Financial Services,” Creating Value in Financial Services, edited by E.L. Melnick, P.R. Nayyar, M.L. Pinedo, S. Seshadri, Kluwer Academic Publishers, 1999.

“Modeling Services for Financial Institutions in an Emerging Market,” Creating Value in Financial Services, edited by E.L. Melnick, et. al., Kluwer Academic Publishers, 1999.

“Determination of the Value of Risk,” Contingencies, (with A. Tenenbein), July/August 2000, pp. 74-77.

“Risk Analysis: A Unifying Discipline,” AMSTAT, Issue 330, December 2004.

“Statisitcs and Counterterrorism Report.” AMSTAT, Issue 332, February 2005.

“Estimation of Mortality Rates from Insurance Data,” Encyclopedia of Quantitative Risk Analysis and Assessment, (with A. Tenenbein), John Wiley and Sons, 2008

“Copulas and Other Measures of Dependency,” Encyclopedia of Quantitative Risk Analysis and Assessment, (with A. Tenenbein), John Wiley and Sons, 2008

“Risk Analysis and Assessment,” ASME SERAD, (with B. Everitt), 2010

“Modeling Survival Data,” International Encyclopedia of Statistical Sciences, Verlag-Springer, 2010

“Syndromic Surveillance: Early Warning Systems for Monitoring Emerging Outbreaks of Health Events from Either Natural Causes or from Bioterrorists,” Journal of BioTerrorism & BioDefence, 2012.

“Quantitative Decision Tools for the Management and Analysis of the Risk from Terrorists Attacks,” Journal of BioTerrorism & BioDefence, 2015.

B. Books

Creating Value in Financial Services, (with P.R. Nayyar, M.L. Pinedo, S. Seshadri), Kluwer Academic Publishers, 1999

Encyclopedia of Quantitative Risk Assessment **Volumes 1 – 4**, (with B. Everitt), John Wiley and Sons, 2008

C. Popular Press (contribution)

New York Times (17 July 2005). Beltran Treats Martinez to a Home Run. Lee Jenkins, Page B1

Expanding Horizons, "Announcement of the Publication of the Encyclopedia of Quantitative Risk Assessment," (with A. Tenenbein), 40, April 2009

New York Times (16 July 2009). A Mets Fan Is Shut Out from Runs and Hope. Ken Belson, Page B13

Associated Press and NPR radio station (27 October 2009). Is the Earth Cooling? Data Say No. Seth Borenstein

International Encyclopedia of Statistical Sciences was nominated for the Nobel Peace Prize in 2011. I contributed an article to this encyclopedia.

Associated Press (21 March 2012). More US Drilling Didn't Drop Gas Price. Jack Gillum and Seth Borenstein

PAPERS DELIVERED BEFORE PROFESSIONAL ASSOCIATIONS

April 1967	Meeting of the Population Association of America, Cincinnati, Ohio	"Some Quantitative Measures for the Analysis of Fertility Series". Published in the Proceedings.
July 1970	TIMS XVII International Meeting, London, England	"Estimation of Changing Seasonal Components"
March 1971	TIMS XVIII International Meeting, London, England	"Parameter Estimation in Mixed Moving Average Auto-regression Models"

April 1971	Annual Meeting of the Institute of Mathematical Statistics, Fort Collins, Colorado.	"A Test for Weak Bandwidth Stationary". Abstract published in <u>The Annals of Math. Stat.</u> 42, 1971.
April 1972	TIMS XIX International Meeting, Houston, Texas	"Filter Design for the Seasonal Adjustment of a Time Series"
April 1973	Northeast AIDS Conference, Providence, Rhode Island	"Seasonal Adjustment for the Decision Maker". Published in the <u>Proceedings</u>.
June 1973	TIMS XX International Meeting, Tel Aviv, Israel	"Screening Data for Model Building"
February 1975	Salomon Brothers Center for the Study of Financial Institutions, New York, NY	"Forecasting Financial Flows for 1985"
January 1975	National Association of Business Economists, New York, NY	"Spectral Analysis of Time Series"
May & June 1976	Equitable Life Insurance Co., New York, NY	"Data Analytic Time Series Models"
August 1976	Salomon Brothers Center for the Study of Financial Institutions, New York, NY	"A Time Series Model for the Forecasting of the Financial Environment in 1985"
February 1977	University of London Joint Statistics Seminar	"Applications of the Minimum Discrimination Information Statistic to Some Signal Detection Problems"
May 1977	University of Manchester-Sheffield Joint Seminar in Mathematical Statistics	"Stochastic Processes and Statistical inference from an Information Theoretic Viewpoint"
August 1977	Annual Meeting of the Institute of Mathematical Statistics, Seattle,	"A Multivariate Forecasting Model for Input-Output Models"

	Washington	
April 1979	Eastern North American Regional meeting of the Biometric Society, New Orleans, Louisiana	"Evaluation of Intralaboratory and Interlaboratory Variability and Reproductibility" Abstract published in Biometrica.
July 1980	Third International Time Series Meeting, Houston, Texas	"A Test for Stationarity"
September 1981	Eighth Annual Meeting of European Finance Association	"An Empirical Investigation of Stock Returns Volatility"
November 1981	1981 National AIDS Meeting, Boston, Massachusetts	"Estimators of Security Price Volatility
March 1982	Second Annual Options Colloquium sponsored by the AMEX, New York	"Estimators of the Evolving Variance of Stock Returns
August 1983	Joint Statistical Meetings of the American Statistical Association, Toronto, Canada	"The Control of Round-off Error in a class of Computational Algorithms". Published in the Proceedings.
June 1984	TIMS XXVI International Meeting, Copenhagen, Denmark	"Estimation of Functions Within the Family of Elliptical Distributions"
December 1984	Criminal Justice Statistics Conference Program	"Statistical Time Series Models"
December 1986	Annual Conference on Business Forecasting	"Forecasting Multiple Time Horizons"
March 1988	Institute of Mathematical Statistics Spring Meeting	"An Analysis of ARMA Models Based upon Differential Geometry", Published in the Institute of Mathematical Statistics Bulletin.
August 1990	Joint Statistical Meetings of the American	Differential Geometry of Time Series Models

	Statistical Association, Anaheim, California	
October 1990	Association for Consumer Research, New York, New York	Sampling Survey Data: Quota Sample versus Probability Samples
June 1991	11th International Symposium on Forecasting, New York, New York	Testing Bandwidth Stationarity
August 1992	12th International Symposium on Forecasting, Wellington, New Zealand	Combining Subjective Forecasts
June 1993	13th International Symposium on Forecasting, Pittsburgh, Pennsylvania	The Determination of Cycles in Nonstationary Processes
May 1995	Joint ASA and New York University Symposium	Co-organizer: Recent Developments in Time Series
May 1996	Joint ASA and New York University Symposium	Co-organizer: Recent Developments in Sampling Methods
May 1997	Joint ASA and New York University Symposium	Organizer: Creating Value in Financial Services
May 1998	Joint ASA and New York University Symposium	Organizer: Workshop in Financial Econometrics
January 1999	Joint ASA and New York University Symposium	Co-organizer: Computational Finance
May 1999	Joint ASA and New York University Symposium	Organizer: Risk Management: Symposium on Statistical Issues
May 2000	Joint ASA and New York University Symposium	Co-organizer: CreditRisk Derivatives and Risk Management
May 2001	Joint ASA and New York University Symposium	Organizer: Symposium in Honor of Sir David Cox
August 2002	Joint Statistical Meetings of the American Statistical Association, New York, NY	Chair and Discussant: Time Series Methods for Finance and Macroeconomics

August 2003	Joint Statistical Meeting of the American Statistical Association, San Francisco, CA	Discussant: Contributed Papers on Risk Analysis
August 2004	Joint Statistical Meeting of The American Statistical Association, Toronto, CA	Discussant: Contributed Papers on Risk Analysis
November 2004	ASA Section on Risk and National Institute of Statistical Sciences, New York, NY	Co-organizer and discussant: Conference on Homeland Security and Counterterrorism
August 2005	Joint Statistical Meeting of The American Statistical Association, Minneapolis, MI	Discussant and Chair: Contributed Papers on Risk Analysis
August 2006	Joint Statistical Meeting of The American Statistical Association, Seattle WA	Discussant and Chair: Contributed Papers on Economics and Business Statistics
August 2007	Joint Statistical Meeting of The American Statistical Association, Salt Lake City, UT	Discussant and Chair: Contributed Papers on Economics and Business Statistics
August 2007	Joint Statistical Meeting of The American Statistical Association, Salt Lake City, UT	Discussant: Invited Papers on Risk Analysis in National Defense Conference
April 2008	Uncertainty Quantification Workshop, Univ. of Arizona	Keynote address: Taxonomy of Quantitative Techniques for Risk Analysis
August 2009	Joint Statistical Meeting of The American Statistical Association, Washington, DC	Discussant and Chair: Invited Papers on Estimating the Exposure to Risk
August 2010	Joint Statistical Meeting of The American Statistical Association, Vancouver, Canada	Discssant and Chair: Models in Risk Analysis
August 2011	International Statistical Association Dublin, Ireland	Invited Paper: Quantitative Risk Assessment
August 2016	Joint Statistical Meeting of The American Statistical Assoc.	Invited Paper: Quantitative Measures of Financial Risk

In addition to the above papers to professional associations, invited talks were presented to student-faculty seminars at various universities.

DOCTORAL STUDENTS

1. John Moussourakis, dissertation: A Seasonal Adjustment Algorithm Based Upon Fourier Transforms. 1972.

2. George Wang, dissertation: Outlier Detection and Robust Estimation of the Mean. 1972.

3. Kosaku Yoshida, dissertation: Spectral Analysis of Financial Leverage and Diversification in Risky Investment. 1975.

4. James Stanard, dissertation: A Simulation Test of the Efficiency of Loss Reserve Techniques. 1985.

5. Nalini Ravishankar, dissertation: A Unifying Theory for the Study of Time Series Models Based upon Differential Geometry. 1987.

PROFESSIONAL CITIZENSHIP

1. Advisor to the President's Commission of Federal Statistics (1971).

2. Joint Chairman of New York Area Chapter of American Statistical Association Research Section Meeting (1973-1974).

3. Member of the New York Chapter of American Statistical Association Awards Committee (1975-1976).

4. Advisor to the National Science Foundation Review Board (1977-1978).

5. Co-Chairman of Careers in Statistics Conference Sponsored by New York University and the New York Chapter of the American Statistical Association (1980).

6. Chairman of the university program and member of the planning committee for the Eleventh International Symposium of Forecasting (1991).

7. Reviewed books for: Cambridge University Press, Worth Publishers, and John Wiley and Sons.

8. Member of Committee on Methodological Improvements to the Department of Homeland Security (2008).

9. Referee for: Biometrika, International Journal of Forecasting, Journal of the American Statistical Association, Journal of Decision Sciences, Journal of Econometrics, Journal of Forecasting, Management Science, OpSearch, Technometrics, Journal of Business and Economic Statistics, American Statistician, and Risk Analysis, Journal of Bioterrorism and Biodefense, and Statistical Methods in Medical Research.

UNIVERSITY CITIZENSHIP

Contributing author to research grant #HL 14700 entitled "Interactions for Risk Factors for Chronic Obstructive Pulmonary Disease" Awarded to New York University by NIH Health and Lung Institute. This was a 3-year grant from September 1976 to September 1979.

Undergraduate Director of the Statistics and Operations Research Area, 1983-1996.

Member and Chairperson of the Stern School of Business Faculty Council, 1983-1993.

Member of the New York University Faculty Council, 1983-1987. 2007 - 2010

Member of the New York University Senate, 1983-1987, 2007 - 2010.

Member and Chairperson of the New York University Faculty Benefits Committee, 1984-87.

Member and Chairperson of the New York University Financial Affairs Committee, 1984-87.

Chairman of the Department of Statistics and Operations Research, 1995 – 2002

Member of the University Distinguished Teaching Award Committee, 2007 – 2009, 2014 – 2016

Deputy Chair of the Department of IOMS, 2014 - present

STATISTICAL CONSULTING PROJECTS

Intellectual Property Development Corporation
Dr. Gregory Siskind, Cornell University Medical School
Dr. Morton Galdston, New York University Medical School
Dr. George Serban, New York University Medical School
OR/MS Dialogue, Inc.
C.B.S. Election News Service
Hoffman-La Roche

Shearson Hayden Stone, Inc.
Equitable Life Assurance Society of the United States
I.B.M.
JP Morgan
Paine Weber
American Management Association
Morgan Stanley and Company, Inc.
National Westminster Bank
Deutsche Bank
Con Edison
Chemical Bank
Credit Suisse Bank
Pfizer Inc.
Philip Morris, U.S.A.
Swiss Bank Corporation
Metropolitan Life Insurance Company
Janssen Pharmaceutica
Bankers Trust

Expert Testimony:

- New York Stock Exchange, Inc: Paired Enterprises, Ltd. vs National Financial Services Corporation and Herzog, Heine, Geduld, Inc. (Computer Piracy).
- The People of the State of New York vs Anthony Consalvo (Medicaid fraud).
- Myheal Technologies vs Fomar Corporation (compensation for misused intellectual property).
- Thomas vs. Texaco (class action for violation of Title 7 of the Civil Rights Act).
- Rivers vs. Disney (class action for violation of Title 7 of the Civil Rights Act).
- Arbitration Between International Paper and American Excess Insurance Association . (determination of liabilities).

Prepared information documents for legal issues:

- Pricing the collection of solid waste for the Solid Waste Commission of New York City.
- Evaluation of cigar usage surveys used by the Center for Disease Control.
- Statistical evaluation of damages due to sidings installed on buildings
- Statistical analysis of data for the arbitration between International Paper and American Excess Insurance Association