PETER H. RITCHKEN

Department of Banking and Finance
Weatherhead School of Management
Case Western Reserve University
Cleveland, Ohio 44106
(216) 368-3849
(216) 368-6249 (Fax)
email:peter.ritchken@case.edu
webpage: http://weatherhead.case.edu/ritchken

RESEARCH INTERESTS

- Fixed Income and Term Structure Models
- Risk Management in Financial Markets
- Contingent Claims Valuation
- Real Options
- Risk Management in Supply Chains
- Regulatory Issues in Banking

TEACHING INTERESTS

- Derivative Markets and Risk Management
- Financial Engineering and Quantitative Finance
- Fixed Income and Credit Markets
- Mathematical Finance
- Investment Management
- Real Options
- Corporate Finance
- Projects in Risk Management

EDUCATION

1981 Ph.D., Operations Research, ***Case Western Reserve University***, Cleveland, Ohio.

1977 M.S., Operations Research, ***University of Cape Town***, Cape Town, South Africa.

1974 B.S., Honors, Mathematical Statistics, ***University of Cape Town***, Cape Town, South Africa.

1973 B.S., Mathematics, ***University of Cape Town***, Cape Town, South Africa.

APPOINTMENTS

Academic Appointments

6/08- **Case Western Reserve University,** Cleveland, Ohio
Founder and *Director of the MS Finance Program*

6/02- 6/09 **Case Western Reserve University,** Cleveland, Ohio
Chair of the Department of Banking and Finance

6/98- Present **Case Western Reserve University,** Cleveland, Ohio
Kenneth Walter Haber Professor of Finance
Department of Banking and Finance

9/92-6/98 **Case Western Reserve University,** Cleveland, Ohio
Professor of Operations Research & Banking and Finance

9/87-9/92 **Case Western Reserve University,** Cleveland, Ohio
Associate Professor of Operations Research & Banking and Finance

2/89-12/89 **University of Southern California**, Los Angeles
Visiting Associate Professor, Department of Finance and Business Economics

8/81-8/87 **Case Western Reserve University**, Cleveland, Ohio
Assistant Professor of Operations Research.

1/80-6/81 **John Carroll University**, University Heights, Ohio
Instructor, School of Business Administration

6/76-6/77 **University of Cape Town**, South Africa
Instructor, Department of Mathematical Statistics

Other Appointments

Summers 93- **Federal Reserve Bank**, Cleveland, Ohio
Research Scholar, Research Department.

1994-2000 Managing Editor, *Advances in Futures and Options Research.*

1994-2000 Member of CWRU Center for Stochastic and Chaotic Processes in Science and Technology.

PUBLICATIONS

Books

Advances in Futures and Options Research, Vol. 10, 1999, Published by JAI Press, Greenwich, CT. Edited this volume with P. Boyle and G. Pennacchi.

Advances in Futures and Options Research, Vol. 9, 1997, Published by JAI Press, Greenwich, CT. Edited this volume with P. Boyle and G. Pennacchi.

Advances in Futures and Options Research, Vol. 8, 1995, Published by JAI Press, Greenwich, CT. Edited this volume with P. Boyle and F. Longstafff.

Derivative Markets. Published by Harper Collins, 1995. This is an introductory text in futures, options, swaps and other derivatives. It has been translated into Chinese and published in 2001 by Prentice Hall in Taiwan.

Contemporary Portfolio Management, G. Getts, P. Ritchken and H. Salkin. Published by Addison Wesley, 1989. This book contains an integrated microcomputer package for portfolio risk management.

Options: Theory, Strategy and Applications. Published by Scott, Foresman & Company, 1987. This book is intended to serve as a text for graduate level courses in options, speculative markets and corporate finance.

Publications

Option Pricing, Portfolio Risk Management, Computational Methods in Finance

"Inflation Expectations, Real Rates, and Risk Premia: Evidence form Inflation Swaps", with J. Haubrich and G. Pennacchi, forthcoming, Review of Financial Studies.

Contracting with Asymmetric Demand Information in Supply Chains", with V. Babich, H. Li and Y. Wang, forthcoming in European Journal of Operations Research, 2011.

"On Correlation and Default Clustering in Credit Markets", with A. Berndt and Z. Sun, Review of Financial Studies, 23, 2010, 2680-2729

"On Forecasting Credit Spreads", with CNV Krishnan and J. Thomson, *Journal of Financial Intermediation,* 19, 2010, 529-563

" Correlation Risk," with CNV Krishnan and R. Petkova, *Journal of Empirical Finance*, 16, 2009, 353-367 (lead article)

"Option and Forward Contracting with Asymmetric Information: Valuation Issues in Supply Chains" with H. Li and Y. Wang, *European Journal of Operational Research,* Vol. 197, Issue 1, August 2009, 134-148

"Competition and Diversification Effects in Supply Chains with Default Risk", with V. Babich and A. Burnetas*, Manufacturing and Service Operations Management*, 9, Spring, 2007,123-146 (lead article)

"On Pricing and Hedging in the Swaption Market: How Many Factors, Really?" with R Fan, A. Gupta, 15, *The Journal of Derivatives*, Fall 2007, 9-33 (lead article)

"On Pricing Derivatives in the Presence of Auxiliary State Variables", with J. Lin, *The Journal of Derivatives*, Winter 2006, 29-47.

"Approximating GARCH-Jump models, Jump Diffusion Processes and Option Pricing, with J. Duan and Z. Sun*, Mathematical Finance*, January 2006, 21 -52.

"On Credit Spread Slopes and Predicting Bank Risk", with C. Krishnan and J. Thomson; *Journal of Money, Credit and Banking,* September 2006, 1545-1574.

"An Empirical Comparison of GARCH Models", with K.C. Hseih, *Review of Derivatives Research,* Fall, 2005, 129-150

"Monitoring and Controlling Bank Risk: Does Risky Debt Help?" by C. Krishnan, P. Ritchken, J. Thomson, *Journal of Finance*, Vol LX, No. 1, 2005, 343-378.

"Option Pricing with Downward Sloping Demand Curves: The Case of Supply Chain Options", with A. Burnetas, 2005, *Management Science.566-580*

“Hedging in the Possible Presence of Unspanned Stochastic Volatility: Evidence from Swaption Markets”, by R. Fan, A.Gupta, and P. Ritchken, *Journal of Finance*, Vol 58, No. 5, 2003, 2219-2248.

“Getting the Most out of a Mandatory Subordinated Debt Requirement”, by R. Fan, J. Haubrich, P. Ritchken, J. Thomson, *Journal of Financial Services Research*, Vol 24, No.23, October-December, 2003, 149-179.

“Option Pricing Under Regime Switching”, by J. Duan, I. Popova, and P. Ritchken, *Quantitative Finance,* Vol. 2, 2002, 1-17.

“Pricing Claims Under GARCH-Level Dependent Interest Rate Processes”, by V. Cvsa and P. Ritchken, *Management Science*, December 2001, Vol. 47, No. 12, pp. 1693-1711.

“Interest Rate Option Pricing With Volatility Humps”, by Peter Ritchken and Iyuan Chuang, *Review of Derivatives Research*, 1999, Vol. 3, pp. 237-262.

“Option Pricing Bounds Under Decreasing Absolute Risk Aversion”, by K. Mathur and P. Ritchken *Review of Derivatives Research, 1999, Vol. 3, 135-156.*

‘’Option Pricing Under GARCH and Stochastic Volatility”, by P. Ritchken and R. Trevor, *Journal of Finance*, 1999, Vol. 54, No. 1, pp. 377-402.

“On Bounding Option Prices in Paretian Stable Markets,” by I. Popova and P. Ritchken, *The Journal of Derivatives,* Summer pp 32-44, 1998.

“Implications of the Changing Role of Banks on Deposit Guarantees,” by P. Ritchken, I. Popova, and J. Thomson, *Advances in International Banking and Finance,* Vol. 3, 1998.

“On Rational Jump Diffusion Models: An Approach Using Potentials”, by A. Burnetas and P. Ritchken, *Review of Derivatives Research*, Vol. 1, pp 325-347,1997.

“Option Pricing Under Fat Tails: The Case for Paretian Stable Distributions”, by A. Janicki, I. Popova, P. Ritchken and W. Woyczynski, *Communications in Statistics: Stochastic Models*, Vol 13, pp. 817-839, 1997.

“Empirical Tests of Two-State Variable HJM Models,” by R. Bliss and P. Ritchken, *Journal of Money, Credit and Banking*, August 1996, Vol. 28, No. 3, pp. 454-476.

“Pricing Exotic Interest Rate Sensitive Claims,” by P. Ritchken and L. Sankarasubramanian, *Handbook of Derivatives Instruments*, Irwin, 1996.

“On Pricing Kernals and Finite State-Variable Heath, Jarrow, Morton Models”, by G. Pennacchi, P. Ritchken and L. Sankarasubramanian, *Review of Derivatives Research*, 1996, Vol. 1, pp. 87-99.

"Regulatory Taxes, Investment and Financing Decisions for Insured Banks," by A. Li, P. Ritchken, L. Sankarasubramanian and J. Thomson, *Advances in International Banking and Finance*, 1996, Vol. 2, pp 1-30.

“Bond Price Representations and the Volatility of Spot Interest Rates”, by P. Ritchken and L. Sankarasubramanian, *Review of Quantitative Finance and Accounting*, November 1996, Vol. 7, No. 3, pp. 279-288.

“On Pricing Barrier Options”, by P. Ritchken. *Journal of Derivatives*, Winter, 1995, Vol. 3, pp. 19-28.

“The Importance of Forward Rate Volatility Structures in Pricing Interest Sensitive Claims”, by P. Ritchken and L. Sankarasubramanian. *Journal of Derivatives*, Fall 1995, Vol. 3, pp. 25-41.

“Near Nirvana”, by P. Ritchken and L. Sankarasubramanian, *Risk Magazine,* Vol. 8, No. 9, pp. 109-111, 1995.

“Lattice Works”, by Anlong Li, P. Ritchken and L. Sankarasubramanian, *Risk Magazine,* Vol. 8, No. 11, pp. 65-69, November 1995.

“Lattice Models for Pricing American Interest Rate Claims”, by A. Li, P. Ritchken and L. Sankarasubramanian. *Journal of Finance*, Vol. 50, No. 2, pp. 719-737, June 1995.

“A Multifactor Model of the Quality Option in Treasury Futures Contracts”, by P. Ritchken and L. Sankarasubramanian. *The Journal of Financial Research*, Vol. 18, No. 3, pp. 261-279, 1995.

"The Asset Flexibility Option and the Value of Deposit Insurance," by P. Ritchken, J. Thomson, R. DeGennaro, and A. Li. *Research in Finance*, Vol. 13, pp. 219-236, 1995.

"Volatility Structures of Forward Rates and the Dynamics of the Term Structure", by P. Ritchken and L. Sankarasubramanian, *Mathematical Finance*, January 1995, Vol. 5, No. 1, pp. 55-72.

"Averaging and Deferred Payment Yield Agreements," by P. Ritchken and L. Sankarasubramanian. *Journal of Futures Markets*, February 1993, Vol. 13, No. 1, pp. 23-41.

"The Valuation of Path Dependent Contracts on the Average," by P. Ritchken, L. Sankarasubramanian and A. Vijh. *Management Science*, October 1993, Vol. 39, No. 10, pp. 1202-13.

"On Flexibility, Capital Structure and Investment Decisions for the Insured Bank," by P. Ritchken, J. Thomson, R. DeGennaro and A. Li. *Journal of Banking and Finance*, 1993, Vol. 17, pp. 1133-46.

"Exchange Traded Foreign Warrants," by E. Gruca and P. Ritchken. *Advances in Futures and Options Research*, 1993, Vol. 6, pp. 53-66.

"Valuation of Covert Greenmail Payments: A Study of Returns to a Financial Innovation," by R. Aggarwal, M. Moran and P. Ritchken. *Journal of Financial Engineering*, December 1992, Vol. 1, No. 3, pp. 344-68.

"Pricing the Quality Option in Treasury Bond Futures," by P. Ritchken and L Sankarasubramanian. *Mathematical Finance*, July 1992, Vol. 2, pp.197-214.

"Warranty Valuation with Moral Hazard Conditions," by S. Kuo and P. Ritchken. *Journal of Financial Engineering*, June 1992, Vol. 1, pp. 82-104.

"Multinomial Approximating Models for Options with k State Variables," by B. Kamrad and P. Ritchken. *Management Science*, December 1991, Vol. 37, pp. 1640-1653.

"A Binomial Contingent Claims Model for Valuing Risky Ventures," by P. Ritchken and B. Kamrad. *European Journal of Operational Research*, July 1991, Vol. 53, pp. 106-118.

"Averaging Options for Capping Total Costs," by P. Ritchken, L. Sankarasubramanian and A. Vijh. *Financial Management*, Autumn 1990, Vol. 19, pp. 35-41.

"On Valuing Complex Interest Rate Claims," by P. Ritchken and L. Sankarasubramanian. *Journal of Futures Markets*. October 1990, Vol. 10, No. 5, pp. 443-455.

"On Arbitrage Free Pricing of Interest Rate Contingent Claims," by P. Ritchken and K. Boenawan. *Journal of Finance*, March 1990, Vol. 45, No. 1, pp. 259-64.

"Stochastic Dominance and Decreasing Absolute Risk Averse Option Pricing Bounds," by P. Ritchken and S. Kuo. *Management Science*, Vol. 35, No. 1, January 1989, pp. 51-59.

"Option Pricing Bounds with Finite Revision Opportunities," by P. Ritchken and S. Kuo. *Journal of Finance*, Vol. 43, No. 2, June 1988, pp. 301-308.

"Capital Budgeting Methods Using Contingent Claims Analysis: A Tutorial," by P. Ritchken and Gad Rabinowitz. *Recent Advances in Futures and Options Research*, Vol. 3, 1988, pp. 119-143.

"Downside Risk Option Pricing Models," by P. Ritchken and Wen Kwei Chen. *Recent Developments in International Banking and Finance*, Vol. 2, 1987, pp. 205-225.

"Contingent Claims Contracting for Purchasing Decisions in Inventory Management," by P. Ritchken and C. Tapiero. *Operations Research*, Vol. 34, No. 6, November-December 1986, pp. 864-70.

"Recursive Models For Warrant Pricing," by P. Ritchken and M. Ferri. *Recent Developments in International Banking and Finance*, Vol. 1, 1986, pp. 256-271.

"A Portfolio Risk Management Simulation Game," by P. Ritchken and G. Getts. *Simulation and Games*, Vol. 16, No. 1, March 1985, pp. 49-62.

"Enhancing Mean Variance Analysis with Options," by P. Ritchken, *Journal of Portfolio Management*, Vol. 11, No. 3, Spring 1985, pp. 67-71.

"A Stochastic Dominance Algorithm Using Piecewise Linear Approximations," by P. Ritchken, Y. Aggarwal, and A. Gupta. *Decision Sciences*, Vol. 15, Fall 1985, pp. 370-380.

"On Option Pricing Bounds," by P. Ritchken. *The Journal of Finance*, Vol. XL, No. 4, September 1985, pp. 1219-33.

"Establishing Warranty Reserves for a Product Which Fails Given Imperfect Information," by B. V. Dean, A. Reisman, and P. Ritchken, *Applications of Management Science*, Vol. 4, 1985, pp. 177-93.

"The Effect of Estimation Risk in Performing Stochastic Dominance Efficiency Tests on Normal and Lognormal Prospects," by P. Ritchken and A. Gupta. *Decision Sciences*, Vol. 15, No. 4, Fall 1984, pp. 498-506.

"Safety First Selection Techniques for Option Spreads," by P. Ritchken and H. Salkin. *Journal of Portfolio Management*, Vol. 9, No. 3, Spring 1983, pp. 61-67.

"Comment: Option Spreading," by P. Ritchken and H. Salkin. *Journal of Portfolio Management*, Vol. 7, No. 2, Winter 1981, pp. 89-90.

Quality Control, Reliability, Warranty Pricing, Risk Management

"Joint Inventory Replacement Policies for Parallel Machines," M. Aka, S. Gilbert and P. Ritchken, *IIE Transactions*, 1997.

"Valuing Fixed Price Supply Contracts," by B. Kamrad and P. Ritchken. *European Journal of Operational Research*, Vol. 74, No. 1, April 1994, pp. 50-60.

"An Economic Based (m,T) Group Maintenance Policies," by P. Ritchken and J. Wilson. *Management Science*, Vol. 36, No. 5, May 1990, pp. 632-639.

"The Servicing Capacity/Quality Control Problem," by P. Ritchken, J. Chandramohan and C. Tapiero. *IIE Transactions*, 1989.

"Reliability, Pricing, and Quality Control," by C. Tapiero, P. Ritchken and A. Reisman. *European Journal of Operational Research*, Vol. 31, No. 1, January 1987, pp. 37-45.

"Optimal Replacement Policies for Irreparable Warrantied Items," by P. Ritchken and D. Fuh. *IEEE Transactions on Reliability*, December 1986, Vol. R-35, No. 5, pp. 621-23.

"Warranty Design Under Buyer and Seller Risk Aversion," by P. Ritchken and C. Tapiero. *Naval Research Logistics Quarterly*, Vol. 33, November 1986, pp. 657-71.

"Product Failures, Manufacturing Reliability and Quality Control: A Dynamic Framework," by C. Tapiero, A. Reisman and P. Ritchken. *INFOR*, Vol. 25, No. 2, 1986, pp. 152-63.

"Note on the (N,T) Replacement Rule," by C. Tapiero and P. Ritchken. *IEEE Transactions on Reliability*, Vol. R-34, No. 4, October 1985, pp. 374-76.

"Warranty Policies for Non-Repairable Items under Risk Aversion," by P. Ritchken. *IEEE Transactions on Reliability*, Vol. R-34, No. 2, June 1985, pp. 147-50.

"The Effect of Estimation Risk in Establishing Safety Stock Levels in an Inventory Model," by P. Ritchken and R. Sankar. *Journal of Operational Research Society*, Vol. 35, No. 12, Fall 1984, pp. 1091-99.

"Management of an Inventory Cycle in a Health Care Setting," by P. Ritchken and B. Boukaabar. *Hospital Material Management Quarterly*, Vol. 5, No. 2, November 1983, pp. 60-69.

Other Articles and Proceedings

"Regulatory Taxes, Investment and Financing Decisions for Insured Banks", by A. Li, P. Ritchken, L. Sankarasubramanian and J. Thomson, 31st Annual Conference on Bank Structure and Copetition, Federal Reserve Bank, May 1995.

"On the Voids in US National Education Statistics," by P. Ritchken, A. Reisman, B. Pollack-Johnson, B. V. Dean, E. Escueta, and G. Li. *Journal of Economic and Social Measurement*, Vol. 14, No. 4, January 1988.

"Key Issues in Portfolio Management With Options," by P. Ritchken, G. Getts and H. Salkin. *Financial Planning Magazine*, 1987.

"Elements of Machine Tool Leasing," by P. Ritchken and L. Kane. *Tooling and Production*, Vol. 51, No. 3, June 1985, pp. 6A-8A, republished Vol. 51, No. 6, September 1985, pp. 4A-6A.

"Simulation Software for Portfolio Decisions," by P. Ritchken and G. Getts. *Proceedings of the Sixteenth Annual Pittsburgh Conference in Modeling and Simulation*. Published by Instrument Society of America, 1985.

"Evaluation of Plastic Lens Coatings by Abrasion Tester," by P. Ritchken and G. Chase. *Proceedings of the Second International Technical Symposium of Optical and Electro-Optical Applied Science and Engineering*, 1985.

"A Quantitative Approach to the Problem of Selecting Option Positions," by P. Ritchken and H. Salkin. *The Financial Planner*, Vol. 10, No. 10, October 1981, pp. 119-24.

TEACHING ACTIVITIES AND STUDENT DEVELOPMENT

Founder and Director of the MSM Finance Program (2007-)

I initiated, developed and directed the masters program in Finance that has evolved into an important program at Weatherhead school. We currently attract several hundred applicants and accept about 50 students.

Classroom Teaching and Curriculum Development

In all courses, my ranking as instructor by students has been consistently above average (mean score is over 4 out of 5). **Won the *Teaching Excellence Award* (teacher of the year)** twice, most recently in 2010, conducted by students in the Weatherhead School of Management; nominated for same award on several other occasions.

Taught and developed the following courses in both the MBA (full and part time) The Executive MBA program, The MSM Finance program and the MS and PhD programs in Finance and Operations Research.

Required Courses in MBA and Executive MBA Program

BAFI 402	Introduction to Corporate Finance
EMBA 424	Managing Risk
EMBA 460	Managing in a Global Economy
QUMM 403	Managerial Statistics
QUMM 405	Quantitative Methods for Management

Elective Courses in MBA Program

BAFI 430	Derivatives and Risk Management
BAFI 431	Fixed Income Markets and their Derivatives.
BAFI 432	Financial Engineering/Risk Management in Financial Markets
BAFI 440	Advanced Topics in Corporate Finance
BAFI 601	Special Topics in Finance
MSFI 491	Projects in Risk Management

Required Courses in M.S./Ph.D. Program in Operations Research

OPRE 425	Probability Theory for Operations Research
OPRE 428	Statistical Methods for Operations Research
OPRE 432	Computer Simulation

Elective Courses in Operations Research

OPRE 504	Mathematical Finance
OPRE 429	Investment Management for Operations Research
OPRE 484	Linear Models
OPRE 545	Statistical Decision Theory and Games

Chairman of Ph.D. Dissertation Committees

- Danko Turcic, PhD 2008, Assistant Professor, Washington University, St. Louis, " Essays in the Interface between Operations and Finance" (co-advisor with M. Sobel)

- Vlad Babich, PhD, 2003, Assistant Professor, University of Michigan, "The Coordination of Operational and Financial Decisions Under Uncertainty", (co-advisor with M. Sobel)

- Zhiqiang Sun, PhD, 2003, National City Bank, "Three Essays on Contingent Claim Pricing"

- Rong Fan, PhD, 2002, Gifford Fong Associates, " Essays in Credit Risk Models and Derivative Pricing"

- Junze Lin, PhD, 2001, Investment Banking, Bears Stern, NY." Three Essays on Pricing and Hedging."

- Viswanath CVSA, PhD (2000), McKinsey Consulting, "Essays in Derivative Pricing and Real Options."

- I-Yuan Chuang, PhD (1998) Assistant Professor, Taiwan. "Three Essays in Pricing Interest Rate Claims".

- Betty Simkins, PhD (1997) Assistant Professor, Oklahoma State University, Stillwater."Two Essays in Corporate Risk Management"

- Ivilina Popova, Ph.D. (1996). Assistant Professor, Purdue University. "Three Essays in Derivatives".

- Ching-pin Liou, Ph.D. (1994). Associate Professor, National Chung Cheng University, R.O.C. " Lattice Approaches for Pricing Path-Dependent Mortgage-Related Products".

- Yul Ryu, Ph.D. (1993). Manager, Planning Department, Sangyong Oil Refining Co., Seoul, Korea. "Primary Commodity and Its Derivatives: Volatility Relationships and Market Efficiency".

- Mian Aka, Ph.D. (1993). Operations Research Analyst. "Joint Inventory/Replacement Policies".

- Anlong Li, Ph.D. (1992). Lehman Brothers, New York. "Computational Schemes for Controlled Stochastic Processes in Financial Economics".

- Bardia Kamrad, Ph.D. (1990). Assistant Professor, Decision Sciences Department, Miami University, Oxford, Ohio. "Multinomial Option Pricing Methods in Capital Budgeting."

- Gregory Getts, Ph.D. (1988). Co-advisor with H. Salkin, Secretary-Treasurer, Mathematical Investing Systems, Cleveland, Ohio. "A Decision Support System for Stock and Option Investments."

- S. Kuo, Ph.D. (1987). Consultant, McKinsey and Company, New York. "Issues Involving the Valuation of Warranties, Options and Other Contingent Claims."

- W. Chen, Ph.D. (1984). Associate Professor, Chinese Military Academy, Taiwan. "Mean Lower Partial Moment Pricing Models"

- R. Symes Ph.D. (1982). Co-advisor with H. Salkin. Vice-President, Lincoln Savings and Loan. "Portfolio Management Techniques for the Selection of Stock/Option Positions."

Member of the Ph.D. and M.S. Dissertation Committees

Member of external PhD committees for many candidates. Participated in many PhD committees at Case Western Reserve. The following list needs to be updated to reflect committees since 1992.

E. Singer, Ph.D. (1991). "Mail Surveys: A Stochastic Optimization Approach for Determining Sample Size."; A. Benmerzouga, Ph.D. (1991). "On Group Maintenance Policies for Machines Operating in Parallel."; R. Kuei, M.S. (1986). "A Strategic Approach Towards Evaluating Health Care Market Effectiveness."; L. Kher, Ph.D. (1985). "Demand Modeling for Systems Planning Using Noisy Realization Theory." (Systems Engineering Department, CWRU) ; G. Madey, Ph.D. (1984). "A Corporate R&D Strategic Planning and Budgeting Problem."; L. Liang, Ph.D. (1984). "Some Generalizations and Applications of Thinning of Point Process-Covariance Analysis."; K. Carter, Ph.D. (1984). "Estimation of Security Beta Coefficients on the Johannesburg Stock Exchange." (Mathematical Statistics Department, University of Cape Town); G. Lorenz, M.S. (1984). "Innovative Start Up Management."; Y. Gibson-Robinson, M.S. (1984). "On Using SOR Techniques For Solution of a Large, Sparse, Nonsymmetric System."

Editorial Boards

- Managing Editor, Advances in Futures and Options Research, (1995-2000)

- Editorial Board, *Recent Developments in International Banking and Finance* (1986-2002)

- Editorial Board of *Accounting and Finance. (1999-2002)*

- Editorial Board of *Review of Derivatives Research. (2001-)*

- Editorial Board of Credit Risk (2010-)

PARTICIPATION IN ACADEMIC GOVERNANCE

- Member, Appointments Committee, 1995, 1997-.2005

- Member, Weatherhead School of Management Council, 1992., 2009-2011

- Member of Chair of Recruitment Comittees in Banking and Finance, 1990-

- Member, Operations Research Faculty Recruitment Committees from 1983-1990.

- Strategic Planning Committee for the Weatherhead School 2001-2.

Served on mumerous ad-hoc committees for the School of Management and for the University.

Examples include Chair MSM Finance Program, University tenure committee, WSOM Research Committee, 1993-2002, PhD planning committees; Acreditation Committte, Representative for university committee that reviews and evaluates Research Seed Grant Proposals, 1990-1991; Quality Management Curriculum Development Program, 1989.; Statistics Chair Search Committee, Undergraduate Curriculum Committee, 1984-1988; Operations Research Education Committee, 1983-1989; Quantitative Methods Committee, 1982-1989;Chair, Operations Research Seminar Committee, 1981-1988; Operations Research Faculty Search Committee, 1983, 1985.

PROFESSIONAL AFFILIATIONS

- The American Finance Association (AFA); The Society for Financial Studies; Informs.
- Global Association of Risk Professionals

Honor Society and Selected Honors

- Omega Rho (The International Honor Society for Operations Research).
- Weatherhead School of Management **Research Recognition Award** 1995-96,
- **Outstanding Teacher of the Year Award** 1987-88, 2009-2010,
- **Other:** Committee organizer for selection of Derivatives papers at multiple conferences; Keynote speakers at multiple events, Judge for best paper awards.

PROFESSIONAL AND INDUSTRIAL EXPERIENCE

(Available upon request)