RICHARD W. GORVETT, FCAS, ASA, CERA, MAAA, ARM, FRM, PH.D.

State Farm Companies Foundation Scholar in Actuarial Science
Director, Actuarial Science Program
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Curriculum Vitae

Education
- Ph.D. (Finance) – University of Illinois at Urbana-Champaign, 1998
- MBA (Finance, Econometrics, and Statistics) – University of Chicago, 1990
- BS (Mathematics) – University of Illinois at Chicago, 1982

Professional Designations
- FCAS – Fellow of the Casualty Actuarial Society
- ASA – Associate of the Society of Actuaries
- CERA – Chartered Enterprise Risk Analyst
- MAAA – Member of the American Academy of Actuaries
- ARM – Associate in Risk Management
- FRM – Financial Risk Manager

Current Position
- Director, Actuarial Science Program, and State Farm Companies Foundation Scholar in Actuarial Science, Department of Mathematics, University of Illinois at Urbana-Champaign

Experience -- Academic
- Actuarial science professor, Departments of Mathematics, Statistics, and Finance, University of Illinois at Urbana-Champaign, 1999-2001 and 2003 to present
  - Director, Actuarial Science Program, Fall 2004 to present
  - Associate Director, Actuarial Science Program, Fall 2003-Summer 2004
  - Courses (1999-2009): Theory of Interest, Actuarial Modeling, Actuarial Risk Theory, Financial Risk Management, Casualty Actuarial Mathematics, Actuarial Capstone, Course 2 Actuarial Exam Preparation, Ph.D. Seminar in Insurance, and Enterprise Risk Management
- Assistant Professor of Finance and Insurance, The College of Insurance, NY, 1998-99
  - Developed and re-structured insurance and actuarial science curricula
  - Taught and advised at both MBA and undergraduate levels
  - Courses: Risk Management and Insurance, Finance, Financial Risk Management.
- Visiting Lecturer, Dept.of Finance, University of Illinois at Urbana-Champaign, 1997-98
  - Courses: Investments and Advanced Corporate Finance
- Teaching Asst., Dept. of Finance, University of Illinois at Urbana-Champaign, 1996
  - Course: Property-Liability Insurance
- Research Asst., Dept. of Finance, University of Illinois at Urbana-Champaign, 1994-95
- Adjunct Professor, Dept. of Finance, University of Illinois at Urbana-Champaign, 1993
  - Courses: Property-Liability Insurance Seminar and Corporate Risk Management

Current Additional Research Affiliation

- Office of Risk Management and Insurance Research (ORMIR), Department of Finance, University of Illinois at Urbana-Champaign, 2004 – present. Current research areas: corporate governance; financial and insurance variable correlations; enterprise risk management

Experience -- Business

- Actuarial Consultant and Independent Educator, 1996-present
  - General property/casualty actuarial and risk management consulting
  - Development of a public-access dynamic financial analysis model
  - Engaged by organizations to provide on-site education regarding actuarial science, insurance, and financial risk management. Organizations have included:
    - Casualty Actuarial Society
    - American Management Association
    - Various insurance companies
    - Midwestern Actuarial Forum
    - New England Actuarial Seminars
  - Online continuing-education courses provided for the Casualty Actuarial Society
- Zurich North America, 2001 – 2003

  Senior Vice President and Director of Internal Audit & Risk Management (from 1/1/02)
  - Functionally, the chief audit executive and director of enterprise risk management for Zurich North America, an approximately $15 billion division of Zurich Financial Services
  - Manage a staff of 20-30
  - Responsible for the following areas:
    - Internal Audit – providing reliable assurance regarding the operational, financial, and information technology risk and control environment
    - Corporate Investigations – investigating fraudulent or questionable financial and human resources activities
    - Risk Management – identifying, assessing, and managing risks
    - Enterprise Risk Management – establishing a comprehensive risk management and modeling framework to aid in making operational and strategic decisions
    - Business continuity and disaster recovery
  - Chair, Risk Management Network
  - Member, Finance Council

  Vice President – Enterprise Risk Management (prior to 1/1/02)
- Consulting Actuary & Director of Midwest Risk Mgt. Practice, Ernst &Young, 1990-92
  - Project and staff management and administration
  - Actuarial analyses for reinsurers, insurance companies, and self-insured entities
  - Risk management and insurance planning studies for corporations and governmental entities
- Consulting Actuary, Tillinghast, a Towers Perrin Company, 1984-88
  - Ratemaking, loss reserving, and financial analyses for reinsurers, insurance companies, and self-insured entities
  - Project and staff management
- Actuarial Analyst, CNA Insurance Companies, 1983-84
  - Loss reserving for reinsurance and commercial lines
- Senior Actuarial Analyst, Reinsurance Division, Allstate Insurance Company, 1982-83
  - Pricing of domestic property-casualty treaty reinsurance

Publications

Peer-Reviewed Publications

- Entries for the *Encyclopedia of Mathematics and Society*, Greenwald and Thomley, eds., Salem Press, to appear in 2011
  - "Loans"
  - "Mathematics, Applied"
  - "Money"
  - "Pensions and IRAs"
  - "Stock Market Indices"

- "A Comparison of Actuarial Financial Scenario Generators," with K. Ahlgrim and S. D'Arcy, 2008, *Variance: Advancing the Science of Risk – the Journal of the Casualty Actuarial Society*, 2(1): 111-134 http://www.variancejournal.org/issues/02-01/111.pdf

- "Modeling Financial Scenarios: A Framework for the Actuarial Profession," 2005, with K. Ahlgrim and S. D'Arcy, *Proceedings of the Casualty Actuarial Society*, Vol. 92, pp. 177-238 http://www.casact.org/pubs/proceed/proceed05/05187.pdf

- "The Effective Duration and Convexity of Liabilities for Property-Liability Insurers Under Stochastic Interest Rates," with K. Ahlgrim and S. D'Arcy, *Geneva Papers on Risk and Insurance*, 2004, Vol. 29, pp. 75-108

- "The Use of Dynamic Financial Analysis to Determine the Optimal Growth Rate of a Property-Liability Insurer," with S. D'Arcy, *Journal of Risk and Insurance*, 2004, Vol. 71, No. 4, pp. 583-615 *(Winner of the 2005 CAS Article Award, presented by the American Risk & Insurance Association)*

- "Modeling of Economic Series Coordinated with Interest Rate Scenarios," 2004, with K. Ahlgrim and S. D'Arcy, peer reviewed by CAS and SOA committees, published on CAS and SOA websites; deliverable associated with CAS-SOA research grant http://www.casact.org/research/econ/

- Chapter 10, "Special Issues," with J. Tedeschi and K. Ward, *Foundations of Casualty Actuarial Science*, Casualty Actuarial Society, 2001

  "Measuring the Interest Rate Sensitivity of Loss Reserves," with S. D'Arcy, *Proceedings of the Casualty Actuarial Society*, 2000, Vol. 87, pp. 365-400 http://www.casact.org/pubs/proceed/proceed00/00365.pdf *(Winner of the 2001 Dorweiler Prize for Best Paper, Casualty Actuarial Society)*

- "A Comparison of Property/Casualty Insurance Financial Pricing Models," with S. D'Arcy, *Proceedings of the Casualty Actuarial Society*, 1998, Vol. 85, pp. 1-88 http://www.casact.org/pubs/proceed/proceed98/980001.pdf

Other Reviewed Publications*

- "Systemic Risk as a Negative Externality," 2011, *Risk Management – Systemic Risk, Financial Reform, and Moving Forward from the Financial Crisis*, Society of Actuaries, pp. 33-34

* Reviewed for appropriateness and quality – e.g., by a committee issuing a call for papers.

Publications (cont.)

<u>Other Reviewed Publications (cont.)</u>

- "Measuring Operational Risk Interdependencies using Interpretive Structural Modeling," with Ningwei Liu, *2007 ASTIN Colloquium* http://www.actuaries.org/ASTIN/Colloquia/Orlando/Papers/Gorvett.pdf

- "A Two-Dimensional Risk Measure," with Jeff Kinsey (UIUC student), *2006 Enterprise Risk Management Symposium Monograph* http://www.soa.org/library/monographs/other-monographs/2006/july/m-as06-1_XV.pdf

- "Interpretive Structural Modeling of Interactive Risks," with Ningwei Liu (UIUC student), *2006 Enterprise Risk Management Symposium Monograph* http://www.soa.org/library/monographs/other-monographs/2006/july/m-as06-1_X.pdf

- "Setting Up the Enterprise Risk Management Office," with Vijendra Nambiar (UIUC student), *2006 Enterprise Risk Management Symposium Monograph* http://www.soa.org/library/monographs/other-monographs/2006/july/m-as06-1_XIV.pdf

- "Foreign Exchange Rate Risk: Institutional Issues and Stochastic Modeling," *Financial and Accounting Systems and Issues Associated with the Globalization of Insurance*, Casualty Actuarial Society, 2001, pp. 19-52 http://www.casact.org/pubs/dpp/dpp01/01dpp19.pdf

- "Parameterizing Interest Rate Models," with K. Ahlgrim and S. D'Arcy, *1999 Casualty Actuarial Society Forum: Dynamic Financial Analysis*, Casualty Actuarial Society, Summer, pp. 1-50 http://www.casact.org/pubs/forum/99sforum/99sf001.pdf

- "Insurance Securitization: The Development of a New Asset Class," *Securitization of Risk*, 1999, Casualty Actuarial Society, pp. 133-173 http://www.casact.org/pubs/dpp/dpp99/99dpp133.pdf *(Winner of the 1999 Michelbacher Award for Best Paper, Casualty Actuarial Society)*

- "Pricing Catastrophe Risk: Could the CBOT Derivatives Have Coped With Andrew?" with S. D'Arcy and V. France, *Securitization of Risk*, 1999, Casualty Actuarial Society, pp. 59-109 http://www.casact.org/pubs/dpp/dpp99/99dpp59.pdf

- Discussion of Cummins, Phillips, and Smith, "Corporate Hedging in the Insurance Industry: The Use of Financial Derivatives by U.S. Insurers," 1998, *North American Actuarial Journal*, 2 (January): 120-126

- "Using the Public-Access DFA Model: A Case Study," with S. D'Arcy, et al; *1998 Dynamic Financial Analysis Call Paper Program*, Casualty Actuarial Soc., pp. 53-118 http://www.casact.org/pubs/forum/98sforum/98sf053.pdf *(Winner of the 1998 Best Call Paper Award, Casualty Actuarial Society Dynamic Financial Analysis Call Paper Program)*

Publications (cont.)

Other Reviewed Publications (cont.)

- "Building a Public Access PC-Based DFA Model," with S. D'Arcy, et al; *1997 Dynamic Financial Analysis Call Paper Program*, CAS, pp. 1-40 http://www.casact.org/pubs/forum/97sforum/97sf2001.pdf *(Winner of the 1997 Best Call Paper Award, Casualty Actuarial Society Dynamic Financial Analysis Call Paper Program)*

- "Asset-Liability Risks (Mismatch Risk)" **

- "Event Risk" **

- "Frequency and Severity (Modeling of)" **

** These articles were accepted, but the publisher subsequently decided not to proceed with publication of the Encyclopedia of Financial Engineering and Risk Management, Routledge.

Non-Reviewed Publications

- "Behavioral Economics: Implications for Enterprise Risk Management," *2012 Actuarial Research Clearinghouse*

- Book review of *Stochastic Optimization Models in Finance*, in the *Journal of Risk and Insurance* 2010, 77(3): 711-712

- Book review of *Operational Risk: Modeling Analytics*, in the *Journal of Risk and Insurance* 2010, 77(3): 713-714

- "Undergraduate Research in Actuarial Science and Financial Mathematics at the University of Illinois," *2010 Actuarial Research Clearinghouse* http://www.soa.org/library/proceedings/arch/2010/arch-2010-iss1-gorvett.pdf

- "Stochastic Modeling in Actuarial Science and Financial Mathematics: A Research Experience for Undergraduates," *2008 Actuarial Research Clearinghouse* http://www.soa.org/library/proceedings/arch/2008/arch-2008-iss1-gorvett.pdf

- "A Comparison of Actuarial Financial Scenario Generators," with K. Ahlgrim and S. D'Arcy, 14th Annual International AFIR Colloquium, 2004

- "Asset-Liability Modeling for Insurers: Incorporating a Regime-Switching Process for Equity Returns into a Dynamic Financial Analysis Model," with K. Ahlgrim and S. D'Arcy, 35th ASTIN Colloquium, 2004

- Book review of *Climate Risk and the Weather Market: Financial Risk Management with Weather Hedges*, in the *Journal of Risk and Insurance* 2004, 71(3): 550-552

- Book review of *Why Stock Markets Crash: Critical Events in Complex Financial Systems*, in the *Journal of Risk and Insurance* 2005, 72(1): 190-192

Publications (cont.)

Non-Reviewed Publications (cont.)

- "Modeling of Economic Series Coordinated with Interest Rate Scenarios: A Progress Report on Research Supported by the Casualty Actuarial Society and the Society of Actuaries," with K. Ahlgrim and S. D'Arcy, *Actuarial Research Clearing House*, 2004 http://www.soa.org/library/proceedings/arch/2004/arch04v38n1_5.pdf

- "CAS Needs to Restructure Exams 3 and 4," with S. D'Arcy, *The Actuarial Review*, February 2002, pp. 9-10

- "Hacking a Path Through the Thickets," with S. D'Arcy, *Global Reinsurance*, November 2000, Vol. 9, Issue 7, pp. 52-55

- "Training Future Actuaries: The New Actuarial Exam Structure," *The Actuarial Review*, May 2000, pp. 7-8, 10

- "A Sensitive Subject: The Sensitivity of Property/Casualty Liabilities to Interest Rates," with S. D'Arcy, *Global Reinsurance*, 1999, Vol. 8, No. 7, pp. 70-72

- "Protecting the Bottom Line: Insurance and Alternatives," with N. Scordis, *Best's Review: Property/Casualty*, April 1999, Vol. 99, No. 12, p. 79

- "Building a Dynamic Financial Analysis Model That Flies," with S. D'Arcy, et al; *Contingencies* (November/December 1997), pp. 40-45

Book

- *Study Manual for Exam FM/Exam 2: Financial Mathematics & Financial Economics*, 2010, 10th edition, Actuarial Study Manuals, Westbury, NY, 708 pages, with Harold Cherry

Papers Under Journal Review

- "Asset-Liability Modeling for Insurers: Incorporating a Regime-Switching Process for Equity Returns into a Dynamic Financial Analysis Model," with K. Ahlgrim and S. D'Arcy, *Risk Management & Insurance Review* (accepted subject to specified revisions)

- "A Multi-Period Contingent Claims Model for Property-Liability Insurance," *Journal of Risk and Insurance* (requested to revise and resubmit)

Quoted in Article

- "ERM: Pauper or Prince?" by Robert Derocher, *Insight: the Magazine of the Illinois CPA Society*. Extensive quotes on Enterprise Risk Management; March 2005

ORMIR Research Report

- "The Impact of the 2002 Sarbanes-Oxley Act on the Insurance Industry," with Mark Vonnahme

Research in Progress

- “Agent-Based Modeling: Applications in Insurance and Finance”
- “Nonlinearity and Complex Systems: Applications to Actuarial Science and Finance”
- “Cognitive Failures and Enterprise Risk Management”
- “Fuzzy Modeling of Risk”

REUs and REGs

- Research Experience for Undergraduates (REU), Summer 2009, “Stochastic Modeling in Actuarial Science and Financial Mathematics”
- Research Experience for Graduate Students (REG), Summer 2008, “The Mathematics of Discounting : Implications for Actuarial Science and Financial Risk Management”
- Research Experience for Undergraduates (REU), Summer 2007, “Stochastic Modeling in Actuarial Science and Financial Mathematics”
- Research Experience for Graduate Students (REG), Summer 2006, “The Mathematics of Risk Measurement”

Mentoring of Undergraduate Research

- Projects
    - “Predator-Prey Models and their Applications to Finance and Economics”
    - “Agent-Based Modeling in Insurance and Risk-Management”
    - “Neuroeconomics and Risk”
    - “Power Laws and the Structure of the Insurance Market”
    - “Reverse Mortgages and Equity Releases: Modeling Housing-Related Products”
    - “Modeling the Securitization of Pension Claims”
    - “Fuzzy Modeling of Risk”

Presentations and Seminars

- "A Shift in Actuarial Methods: Insights from the Behavioral Perspective," SOA Webcast, November 2011
- "ERM Implications of Behavioral Economics," ERM Conference, Chicago, IL, November 2011
- Systemic Risk as a Negative Externality," Society of Actuaries Annual Meeting, Chicago, IL, October 2011
- "Current Megatrends: Implications for Enterprise Risk Management," Midwestern Actuarial Forum meeting, St. Paul, MN, September 2011
- "Behavioral Economics: Implications for Enterprise Risk Management," Actuarial Research Conference, Storrs, CT, August 2011
- "Research Trends and Opportunities in Actuarial Science and Financial Mathematics," Mathematical Association of America (Illinois) Conference, Naperville, IL, April 2011
- "Introduction to Enterprise Risk Management," continuing professional education, web-based course, Casualty Actuarial Society
    - September 2011
    - June 2011
    - September 2010
    - October 2009
    - January 2009
    - September 2008
    - January 2008
    - June 2007
    - January 2007
    - October 2006
- "Agent-Based Modeling: Applications to ERM," ERM Symposium, Chicago, IL, April 2010
- "Undergraduate Research in Actuarial Science and Financial Mathematics at the University of Illinois," Actuarial Research Conference, Madison, WI, August 2009
- "Enterprise Risk Management: Hollow Tree or Giant Redwood?" Midwestern Actuarial Forum Spring Meeting, Chicago, IL, March 2008
- "Stochastic Modeling: A Research Experience for Undergraduates," Actuarial Research Conference, Pittsburgh, PA, August 2007
- "*Variance*: A New CAS Journal," Actuarial Research Conference, Pittsburgh, PA, August 2007
- "Using Interpretive Structural Modeling to Identify and Quantify Interactive Risks," ASTIN Symposium, Orlando, FL, June 2007
- "Using Interpretive Structural Modeling to Identify and Quantify Interactive Risks" Office of Risk Management & Insurance Research, Urbana, IL, April 2007
- "Measuring Operational Risk Interdependencies Using Interpretive Structural Modeling" 2007 Bowles Symposium, at the Enterprise Risk Management Symposium, Chicago, IL, March 2007
- "The Role of Auditing in the Enterprise Risk Management Process," Society of Actuaries Annual Meeting, Chicago, IL, September 2006
- "Modeling of Economic Series: Building a Financial Foundation for Enterprise Risk Management," Enterprise Risk Management Symposium, Chicago, IL
    - April 2006
    - May 2005
    - April 2004

Presentations and Seminars (cont.)

- "Modeling Financial Scenarios: A Framework for the Actuarial Profession," Casualty Actuarial Society Annual Meeting, Baltimore, MD, November 2005***
- "Financial Risk Management: Interest Rate Models," Module 4 of the Financial Risk Management Web-Based Course, Casualty Actuarial Society
    - March 2005
    - March 2004
- "Financial Risk Management: Securitization," Module 3 of the Financial Risk Management Web-Based Course, Casualty Actuarial Society
    - November 2005
    - November 2004
    - November 2003
    - July 2002
    - November 2001
    - January 2001
- "The Building Blocks of Financial Risk Management: Forwards, Futures, Swaps, and Options," Module 2 of the Financial Risk Management Web-Based Course, Casualty Actuarial Society
    - August 2005
    - August 2004
- "Introduction to Financial Risk Management for Insurers," Module 1 of the Financial Risk Management Web-Based Course, Casualty Actuarial Society
    - May 2005
    - May 2004
- "A Comparison of Actuarial Financial Scenario Generators," 14th Annual International AFIR Colloquium, Boston, MA, November 2004***
- "Asset-Liability Management and Principles of Finance," Limited Attendance Seminar, Casualty Actuarial Society
    - Boston, MA, September 2005
    - Las Vegas, NV, September 2004
    - Chicago, IL, September 2003
    - Arlington, VA, September 2002
- "Complexity and Complex Adaptive Systems," Actuarial Research Conference, Iowa City, IA, August 2004
- "Modeling of Economic Series Coordinated with Interest Rate Scenarios," California State University, Fullerton, Center for Insurance Studies, August 2004***
- "Asset-Liability Modeling for Insurers: Incorporating a Regime-Switching Process for Equity Returns into a Dynamic Financial Analysis Model," 35th ASTIN Colloquium, Bergen, Norway, June 2004***
- "Nonlinear Dynamics and Complex Systems: Understanding the Basics for Future Enterprise Risk Management Applications," Enterprise Risk Management Symposium, Chicago, IL, April 2004
- "Enterprise Risk Management," Risk & Insurance Management Society, Bloomington, IL, March 2004
- "Financial Scenario Models and Parameter Sensitivity: An Application to Life Insurance," Western Risk and Insurance Association, Las Vegas, NV, January 2004***
- "Enterprise Risk Management and Business Continuity," Crisis Management and Business Continuity Seminar, Bloomington, IL, October 2003

Presentations and Seminars (cont.)

- "Modeling of Economic Series Coordinated with Interest Rate Scenarios: Research Sponsored by the Casualty Actuarial Society and the Society of Actuaries," Actuarial Research Conference, Ann Arbor, MI, August 2003
- "An Overview of Capital Management for Property/Casualty Insurance Companies," CAS Risk & Capital Management Seminar, Washington, DC, July 2003
- "Securitization and Other Instruments for Transferring Risk to the Capital Markets," CAS-SOA Enterprise Risk Management Symposium, Washington, DC, July 2003
- Dynamic Financial Analysis Limited Attendance Seminar, Casualty Actuarial Society
    - Washington, DC, July 2003
    - Toronto, ON, June 2002
    - Boston, MA, June 2001
    - Atlanta, GA, September 2000
    - New York, NY, May 1999
    - Chicago, IL, October 1998
- "Actuarial Science and Financial Mathematics: Doing Integrals for Fun and Profit," Graduate Program, Department of Mathematics, Northern Illinois University, February 2003
- "Actuarial Financial Scenario Generator Project," Victoria University, Wellington, New Zealand***
- "Educating Future Actuaries: Curriculum, Context, and Scholarship," University of Illinois at Urbana-Champaign, January 2003
- "Enterprise Risk and Assurance Management," The Insurance Summit, Marcus Evans, Albuquerque, NM, December 2002
- "Dynamic Financial Analysis: A Basic Model," Dynamic Financial Analysis Limited Attendance Seminar, Casualty Actuarial Society, Toronto, ON, June 2002
- "A Dynamic Financial Analysis of the Effect of Growth on Property-Liability Insurers," 27th International Congress of Actuaries, Cancun, March 2002***
- "The Effective Duration of Liabilities for Property-Liability Insurers Assuming Stochastic Interest Rates," American Risk & Insurance Assoc., Baltimore, MD, August 2000
- "Insurance Securitization," International Association of Consulting Actuaries, Hershey, PA, June 2000
- "Basics of Financial Risk Management"
    - Casualty Actuarial Society Spring Meeting, Las Vegas, NV, May 2000
    - Financial Risk Mgt. Seminar, Casualty Actuarial Society, Denver, CO, April 1999
- "CAS Research Efforts: An Academic's Perspective," Casualty Actuarial Society Spring Meeting, Las Vegas, NV, May 2000 "Actuarial Science and Financial Mathematics: Doing Integrals for Fun and Profit," Math 400, guest lecture to graduate students, April 2000 and various dates
- "Options and Insurance Derivatives: A Primer," National Association of Insurance Commissioners, Education Session on Securitization, Chicago, IL, March 2000
- "The Effective Duration of Liabilities for Property-Liability Insurers"
    - 34th Actuarial Research Conference, Des Moines, IA, August 1999
    - American Risk & Insurance Assoc. Annual Meeting, Vancouver, BC, Aug. 1999
- Principles of Finance Limited Attendance Seminar, Casualty Actuarial Society, Boston, MA, June 1999

Presentations and Seminars (cont.)

- Finance Seminars
  - Center for Prof. Ed., The College of Insurance, New York, NY, June 1999
  - Center for Prof. Ed., The College of Insurance, New York, NY, March 1999
- "Insurance Securitization: The Development of a New Asset Class," Casualty Actuarial Society Spring Meeting, Orlando, FL, May 1999
- "Pricing Catastrophe Risk: Could the CBOT Derivatives Have Coped With Andrew?" Casualty Actuarial Society Spring Meeting, Orlando, FL, May 1999
- A.M. Best / The College of Insurance Financial Analysis Seminar -- Life-Health Cos.
  - Chicago, IL, March 1999
  - San Juan, Puerto Rico, November 1998
- "Investing Your Riches: Hemlines, Dartboards, and Other Theories That May Help You Lose Money," Carroll College, WI, March 1999
- "The Convergence of Mathematics and Actuarial Science Research," University of Illinois at Urbana-Champaign, February 1999
- "Analyzing Insurance Company Financial Statements," Center for Professional Education, The College of Insurance, NY, October 1998
- "Derivatives Seminar," American Risk & Insurance Assoc. Annual Meeting, Boston, MA, August 1998
- "Using the Public-Access DFA Model: A Case Study," with S. D'Arcy, et al;
  - American Risk & Insurance Assoc. Annual Meeting, Boston, MA, August 1998
  - CAS Dynamic Financial Analysis Seminar, Boston, MA, July 1998
- "A Comparison of Property-Liability Insurance Financial Pricing Models"
  - Casualty Actuarial Society Spring Meeting, Marco Island, FL, May 1998
  - Illinois Wesleyan University, Bloomington, IL, March 1997
  - Georgia State University, Atlanta, GA, February 1997
  - 31st Actuarial Research Conference, Ball State Univ., Muncie, IN, Aug. 1996
  - American Risk & Insurance Assoc. Annual Meeting, Philadelphia, PA, Aug. 1996
  - Risk Theory Seminar, Madison, WI, April 1996
- "Asset Valuation," Casualty Actuaries of New England, September 1997
- Discussant, "Price Formation Under Asymmetric Information Precision," 1997 FMA Annual Meeting, Honolulu, HI, October 1997
- "Securitization 101"
  - CAS Special Interest Seminar, "Catastrophe Issues," New Orleans, LA, Oct. 1998
  - Zurich Reinsurance Company, New York, NY, September 1998
  - Casualty Actuarial Society Spring Meeting, Marco Island, FL, May 1998
- "Dynamic Financial Analysis of Property-Liability Insurance Companies"
  - FMA Annual Meeting, Hawaii, October 1997
  - American Risk & Insurance Assoc. Annual Meeting, San Diego, CA, August 1997
  - 32nd Actuarial Research Conference, Calgary, Alberta, August 1997
- "Building a Public-Access PC-Based DFA Model" with Stephen P. D'Arcy, et al;
  - Conference of Consulting Actuaries, Scottsdale, AZ, October 1997
  - Midwestern Actuarial Forum, Bloomington, IL, September 1997
  - CAS Dynamic Financial Analysis Seminar, Seattle, WA, July 1997

******* Presentations of joint work delivered by co-authors**.**

Honors and Awards

- Research Awards and Honors
  - Risk Who's Who, Risk Knowledge Network, Inc., 2008
  - CAS Article Award, American Risk & Insurance Association, 2005
  - Dorweiler Prize for Best Paper, CAS, 2001
  - Michelbacher Award for Best Call Paper, CAS, Orlando, FL, 1999
  - First Prize, CAS DFA Call Paper Program, Boston, MA, 1998
  - First Prize, CAS DFA Call Paper Program, Seattle, WA, 1997
- Teaching Awards
  - LAS Dean's Award for Excellence in Undergraduate Teaching, 2008
  - List of Excellent Teachers, University of Illinois, each semester taught at University of Illinois since Fall 1999 (30 times in total)
  - LAS Dean's Teaching Fellowship, University of Illinois, 2000-2001
  - Leonard J. and Sharon Crowley Santow Award for Teaching Excellence, 1996
- Grants
  - 2007 Bowles Symposium, Research Paper Grant.
  - Grant for Summer Seminar for High School Teachers in Actuarial Science and Financial Mathematics, State Farm Companies Foundation, 2006-2008.
  - Research Grant for study and papers, "Modeling of Economic Series Coordinated with Interest Rate Scenarios," with K. Ahlgrim and S. D'Arcy, Casualty Actuarial Society / Society of Actuaries, 2001-2004.
  - Research Grant for monograph, *Financial Risk Management: A Guide for Actuaries*, Committee on Knowledge Extension Research, Society of Actuaries / Casualty Actuarial Society, 2001.
- Scholarship
  - Doctoral Seminar, FMA Annual Meeting, Hawaii, 1997
  - Richard D. and Anne Marie Irwin Doctoral Fellowship, 1996-1997
  - Society of Actuaries / Casualty Actuarial Society Ph.D. Grant, 1996-1997
  - Robert I. Mehr Fellowship, 1997
  - Insurance Education Enhancement Fund Fellowship, 1995, 1996, and 1997
  - Beta Gamma Sigma Honorary Society, University of Chicago, 1990
  - Amoco Foundation Fellowship, 1988-1989
  - Phi Kappa Phi Honorary Society, University of Illinois at Chicago, 1982
  - Phi Beta Kappa Honorary Society, University of Illinois at Chicago, 1982

Academic and Scholarly Activities

- University of Illinois, Department of Mathematics
  - Actuarial Science Committee, 1999-2001, 2003-present
  - Committee on Graduate Affairs, 2009-2011
  - Committee on Undergraduate Affairs, 2000-2001, 2005-2007 (Sec'y, 2006-07)
  - Committee on Mathematics and its Applications, 2000-2001
  - Liaison to College of Business, 1999-2001, 2003-present
- University of Illinois, Department of Finance
  - Educational Policies Committee, University of Illinois Dept. of Finance, 1997-98
  - Graduate Standards Committee, University of Illinois Dept. of Finance, 1996-97
  - Capricious Grading Committee, University of Illinois Dept. of Finance, 1995-96

Academic and Scholarly Activities (cont.)

- Other Activities
  - Chair, UIUC Faculty Benefits Committee, 2008-2011
  - Chair, LAS Honors Council, 2010-2011
  - LAS Honors Council, 2009-2011
  - UIUC Faculty Senate, 2005-2011
  - UIUC LAS Reflective Teaching Seminar, 2000-2001
  - UIUC LAS Teaching Academy, 1999-2001
  - Ph.D. Dissertation Committee, K. Ahlgrim, Dept. of Finance, 1999-2000
  - Advisor, Graduate Actuarial Science Students; Co-Chair, Undergraduate Subcommittee; Curriculum Committee – The College of Insurance, 1998-99

Professional and Industry Activities

- Professional Journal Editing
  - Editor, *Variance: Advancing the Science of Risk*, Casualty Actuarial Society, 2006-present
  - Editorial Board, *Journal of Mathematical Finance*, 2011-present
  - Editorial Board, *Theoretical Economics Letters*, 2011-present
  - Associate Editor, *Journal of Risk Education*, 2004-2009
  - Managing Editor, *Proceedings of the Casualty Actuarial Society*, 2002-2006
  - Editor, *Proceedings of the Casualty Actuarial Society*, 1995-2002
- Casualty Actuarial Society Activities
  - Liaison Representative to the Society of Actuaries' Committee on Knowledge Extension Research, 1997-present
  - Exam Consultant, 2002-present
  - Liaison Representative to the Society of Actuaries' Ph.D. Task Force, 1997-2010
  - Joint (CAS/SOA/AAA) Committee on Academic Relations, 2003-2009
  - Dynamic Risk Modeling Committee, 2003-2006
  - Financial Soundness and Risk Management Committee, 2003-2006
  - Task Force on Study Materials, 2003-2004
  - Editorial Committee, *Proceedings of the Casualty Actuarial Society*, 1991-1998, and 2002-2006
  - Task Force on Publications, 2002-2006
  - Development of actuarial science module for training of new actuaries in country of Kazahkstan
  - Research and Policy Management Committee, 1998-2001
  - Committee on Valuation and Financial Analysis, 1997-2002
  - Program Planning Committee, 1998-2002
  - Committee on Online Services, 1998-2002
  - Task Force on Education and Examination Policy, 1998-2000
  - Liaison Representative to the Society of Actuaries' Task Force on Education and Qualification 2005, 2000-2002
  - Task Force on Examinations 3 and 4, 2000
  - Financial Risk Management Seminar Planning Committee, 1998-1999
  - Dynamic Financial Analysis Task Force on Variables, 1998
  - Moderator, May 1999 CAS Meeting, "The New Actuarial Exam Structure: Responses by Universities and Implications for Recruiting"

Professional and Industry Activities (cont.)

- Midwestern Actuarial Forum Activities
  - President, 2012-2013
  - Vice President, 2011-2012
  - Education Officer, 2009-2011
- Other Activities
  - Reviewer for: *Insurance: Mathematics & Economics*; *Journal of Risk and Insurance; Risk Management & Insurance Review; Journal of Risk Education; ASTIN Bulletin; Annals of Operations Research; North American Actuarial Journal; Geneva Papers on Risk and Insurance; Journal of Modelling in Management*
  - Instructor, Midwestern Actuarial Forum, Actuarial Course 3 Exam Preparation Seminar, Northbrook, IL, September 2000 to March 2002
  - American Risk and Insurance Association 1997 Program Planning Committee
  - Moderator, 1997 ARIA Annual Meeting, "Finance"
  - Session Moderator, 32nd Actuarial Research Conference
  - Instructor, New England Actuarial Seminars, CAS Exam 5B (Finance), 1997-98
  - Member, Risk Theory Society, 1996-2002
  - Member: Midwestern Actuarial Forum, 1987-present

Miscellaneous Professional Activities

- Papers issued as part of professional research committee work
  - "Interest Rate Risk: An Evaluation of Duration Matching as a Risk-Minimizing Strategy for Property / Casualty Insurers," Valuation, Finance, and Investments Committee, Casualty Actuarial Society, December 2001
  - "Report to American Academy of Actuaries Index Securitization Task Force," report on *Evaluating the Effectiveness of Index-Based Insurance Derivatives in Hedging Property / Casualty Insurance Transactions*; Valuation, Finance, and Investments Committee, Casualty Actuarial Society, September 1999
- Subject Matter Expert for course developed for American Management Assoc., 2000-01
  - *Alternative Risk Financing*: a three-day, eight-module professional seminar covering traditional and alternative risk financing techniques – e.g., self-insurance, captives, risk retention and risk purchasing groups, hedging with derivatives, securitization, and enterprise risk management strategies
- Insurance industry advising, 2001-2002
  - Advisor to U.S. Congress, House of Representatives, Financial Services Committee – federal terrorism reinsurance legislation
- Recent proprietary research topics
  - Underwriting capacity relative to terrorism or other catastrophic risks
  - Allocation of underwriting capacity
  - Capital allocation
  - Financial and dynamic financial analysis models
  - Strategic planning models