

Resume  
January, 2012

**RICHARD A. DERRIG, Ph.D**  
**91 FOSDYKE STREET**  
**PROVIDENCE,**  
**RHODE ISLAND, 02906**  
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**EDUCATION:** 1970 Ph.D., Mathematics, Brown University, Providence, RI  
Thesis: C\*-Algebras of Multipliers and Operators Induced by Measure Preserving Transformations.  
1964 M.Sc., Mathematics, Brown University, Providence, RI  
Thesis: Random Ergodic Theorems.  
1962 B.S., Mathematics, St. Peter's College, Jersey City, NJ  
Thesis: Arithmetic Operations in Digital Computers.

**PROFESSIONAL EXPERIENCE:**

***OPAL Consulting LLC***  
***Providence, Rhode Island***  
2004 - Present

***President***

OPAL Consulting LLC provides research and regulatory support to property-casualty insurance clients. Principal areas of expertise include financial pricing models, database and data mining design, fraud detection planning and implementation, and expert testimony for regulation and litigation purposes. See [www.derrig.com](http://www.derrig.com).

***Automobile Insurers Bureau***  
***Boston, Massachusetts***  
1991-2004

***Senior Vice President***

***Responsibilities:*** Overall management of automobile actuarial and statistical departments. Project management for some technical aspects of AIB filings including cost containment and underwriting profit. Direction and coordination of research projects. Design of Auto Injury Claim Database.

***Areas of research:*** investment income and profitability, claim cost forecasting methods, risk measurement of P/C insurance companies, auto bodily injury claims, applications of fuzzy set theory, surplus levels and risk loadings, pricing of tax-exempt securities, rating territories and fraud.

**Insurance Fraud Bureau**  
**Boston, Massachusetts**  
1991-2004

***Vice President Research***

**Responsibilities:** Overall management of the research functions of the Fraud Bureau since its inception in 1991. Database assembly and design, analysis of case types and information flow, management reporting systems, prosecution outcomes, and investigation support are the major projects. Maintenance of the Insurance Fraud Research Register, an annotated bibliography of insurance fraud research worldwide.

**Fox School of Business**  
**Temple University**  
**Philadelphia, Pennsylvania**

2008-2012

***Visiting Professor, Dept. of Risk, Insurance, and Healthcare Management***  
**Responsibilities:** Provide assistance and expertise to the research and educational mission of the department.

**Wharton School**  
**University of Pennsylvania**  
**Philadelphia, Pennsylvania**

2006 (Spring)

***Adjunct Professor, Department of Insurance and Risk Management***  
**Responsibilities:** Teach an undergraduate/MBA course in insurance markets and management.

2004 - 2007

***Visiting Scholar, Department of Insurance and Risk Management***  
**Responsibilities:** Three year appointment to conduct research for a book on Fraud and to provide guest lectures as appropriate.

2002

***Senior Fellow, Department of Insurance and Risk Management***  
**Responsibilities:** One semester appointment to provide guest lectures in classes and the faculty seminar. Develop extensive survey of Insurance Fraud Research.

1994

***Visiting Professor, Department of Insurance and Risk Management***  
**Responsibilities:** One semester appointment for research and guest classroom lecturing in actuarial, graduate and executive education programs. Organization of 4th International Conference on Insurance Solvency and Finance. Dissertation committee for Ph.D. student.

**AIB/Massachusetts Rating Bureaus**  
**Boston, Massachusetts**

1989-1991

***Vice President - Actuarial Operations***

1985-1989

***Vice President - Research***

1978-1984

***Mathematician - Research Director***

1976-1978

***Mathematician***

**Wheaton College**  
**Norton, Massachusetts**  
1975-1976

**Associate Dean of the College, Lecturer in Mathematics**

**Responsibilities:** Administration of academic advisory and various student programs. Membership on Dean's Task Force on Program Development and Funding. Grant responsibilities for NSF and USOE programs.

**Wheaton College**  
**Norton, Massachusetts**  
1969-1975

**Assistant Professor of Mathematics**

Taught a wide range of undergraduate mathematics courses.

**Brown University**  
**Providence, Rhode Island**  
1968-1969  
1967-1968  
Summer 1969  
1967-1968

**Lecturer, Mathematics Department**

Taught undergraduate mathematics courses

Taught Masters Degree students

Research Assistant, Mathematics Department

**Villanova University**  
**Villanova, Pennsylvania**  
1964-1967

**Instructor, Mathematics Department**

Taught at both undergraduate and graduate levels.

**Current Professional Interests:**

Applications of mathematical models to valuation and forecasting problems in economics, finance and insurance.

**Current Professional Associations:**

Mathematical Association of America

Pi Mu Epsilon

American Statistical Association

American Risk and Insurance Association

(Board of Directors 1992-1995, 2006-2009)

Risk Theory Society

International Association of Insurance Fraud Agencies

National Bureau of Economic Research Insurance Group

Casualty Actuarial Society (Chair, Committee on The Theory of Risk)

**Current Publication Peer Reviewer:**

Assurances (Canada) Editorial Board

Risk Management and Insurance Review Editorial Board

Journal of Risk and Insurance Editorial Board

Journal of Insurance Regulation

North American Actuarial Journal

**Other:**

Insurance Fraud Research Register - organized continuing compilation of all available insurance fraud research worldwide. IFRR is available at the <http://derrig.com/ifrr/ifrr.asp>.  
Ph.D. Dissertation Committee for graduate student at University of Pennsylvania - 1993/1994.  
Ph.D. Dissertation Committee for graduate student at University of Texas at Austin - 1995/1996.  
Ph.D. Dissertation Committee for graduate student at University of Leuven, Belgium - 2001/2002.  
Harvard School of Public Health Grant to study effect of seatbelt usage on mortality and morbidity using insurance claims - 1999/2000.  
Casualty Actuarial Society (CAS) and Insurance Research Council (IRC) Grant to study discounting of insurance liabilities, cost of capital and allocation of surplus with Professor J. David Cummins, Professor Richard D. Phillips and Robert P. Butsic in the Risk Premium Project, 1999/2006.  
National Bureau of Economic Research (NBER), Insurance Project Workshops, 1998-2012.  
Insurance Research Council (IRC), Fraud Committee, 1997-2003, Injury Study, 2004.  
American Institute for CPCU, Advisory Committee, 2003-2009.  
University of Warsaw, Poland, Actuarial Summer School Lecturer, 2010.  
Casualty Actuarial Society, Committee on The Theory of Risk, Chair 2009-2012

**Prizes**

Casualty Actuarial Society, 1993 Ratemaking Seminar Call Paper prize (with Herbert I. Weisberg)  
Risk and Insurance Management Society (RIMS), 1998 Edith F. Lichota Award Best Paper.  
Casualty Actuarial Society, 2003, Bowles Symposium Prize Paper (with Elisha D. Orr).  
Casualty Actuarial Society, 2003, Best Paper in 2002, Journal of Risk and Insurance (with Patrick L. Broukett, et.al.).  
American Risk and Insurance Association, 2005, Mehr Award for Paper that "stood the test of time" from JRI, 1995 (with Krzysztof Ostaszewski).  
ARIA President's Award for service 1997, 2007

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### **EXPERT TESTIMONY**

1. Automobile Insurance, AIB Massachusetts Division of Insurance (36), 1976-2007.
2. Workers' Compensation Insurance, Massachusetts Division of Insurance (8), 1977-1989.
3. National Association of Insurance Commissioners (2), Portland, Oregon and New Orleans, Louisiana, 1994.
4. New York State Assembly Committee on Insurance, Public Hearing on Automobile Insurance Fraud, March, 1993.
5. Kentucky Workers' Compensation Funding Commission, Workers' Compensation Educational Conference, Lexington, KY, October, 1993.
6. U.S. District Court for the Eastern District of Pennsylvania, United States v. William S. Matura, D.C., Criminal No. 03-738, July, 2004.
7. California Department of Insurance, Proposed Amendment of Title 10 of California Code of Regulations, Section 2632.8 – Optional Auto Insurance Rating Factors, CDI File #RH 03029820, 2005-2006.
8. California Department of Insurance, Proposed Prior Approval of Insurance Rate Regulations, CDI File #RH 05042749, 2005 – 2007.
9. California Department of Insurance, Proposed Workshop on Prior Approval Variances, Statement of The Doctors Company with Hilary N. Rowan, 2007.
10. Alberta Automobile Insurance Rate Board, Review of Profit Level for Automobile Industry, November 2006.
11. Massachusetts Division of Insurance, Arbella Insurance, Docket R-2007-09, January 18, 2008.
12. California Department of Insurance, The Doctors Company, Prior Approval Regulation Recommendation, Appendix 2, December 2008.
13. Massachusetts Division of Insurance, Massachusetts Property Insurance Underwriting Association, Filing for Rates Effective 12/31/2009, Docket 2009-02, and Effective 12/31/2011

### **BOOKS**

1. 1988, Classical Insurance Solvency Theory, J. David Cummins and R. A. Derrig eds., Kluwer Academic Publishers, Boston.
2. 1989, Financial Models of Insurance Solvency, J. David Cummins and R. A. Derrig eds., Kluwer Academic Publishers, Boston.
3. 1991, Managing the Insolvency Risk of Insurance Companies, J. David Cummins and R. A.

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Derrig eds., Kluwer Academic Publishers, Boston.

### **PAPERS** (*Peer-Reviewed Publications*)

1. 1987, "The Use of Investment Income in Massachusetts Private Passenger Automobile and Workers' Compensation Ratemaking," Chapter 6, J.D. Cummins and S.E. Harrington, eds. Fair Rate of Return in Property-Liability Insurance, Hingham, MA, Kluwer-Nijhoff.
2. 1989, "Solvency Levels and Risk Loadings Appropriate for Fully Guaranteed Property-Liability Insurance Contracts: A Financial View," Financial Models of Insurance Solvency, J. David Cummins and R. A. Derrig Eds, Kluwer Academic Publishers, Boston, 1989.
3. 1991, with H.I. Weisberg, "Fraud and Automobile Insurance: A Report of Bodily Injury Liability Claims in Massachusetts," Journal of Insurance Regulation, V9 (June), 497-541.
4. 1992, with H. I. Weisberg, "Massachusetts Automobile Bodily Injury Tort Reform", The Journal of Insurance Regulation, V10 (Spring), 384-440.
5. 1993, "Price Regulation in US Automobile Insurance - A Case Study of Massachusetts Private Passenger Automobile Insurance 1978-1990", The Geneva Papers on Risk and Insurance No. 67 (April), 158-173.
6. 1993, with J.D. Cummins, "Fuzzy Trends in Property-Liability Insurance Claim Costs", Journal of Risk and Insurance, V60, No. 3. 429-465.
7. 1994, with L. Krauss, "First Steps to Fight Workers Compensation Fraud", Journal of Insurance Regulation, V12, No. 3 (Spring), 390-415.
8. 1994, with H.I. Weisberg and X. Chen, "Behavioral Factors Under No-Fault with a Monetary Threshold: A Study of Massachusetts Automobile Claims", Journal of Risk and Insurance, V61, No. 2, 245-275.
9. 1994, "Theoretical Considerations of the Effect of Federal Income Taxes on Investment Income in Property-Liability Ratemaking", Journal of Risk and Insurance, V61, 4, 691-709.
10. 1995, with K. Ostaszewski, "Fuzzy Techniques of Pattern Recognition in Risk and Claim Classification", Journal of Risk and Insurance, V.62, No. 3. 447-482. (Winner ARIA Mehr Award, Best 1995 JRI Paper that stood the test of time, 2005).
11. 1995, with J. David Cummins, "Symposium on Insurance Solvency and Finance", Journal of Risk and Insurance, V. 62, No. 3, 405-408 (September).
12. 1997, with K.M. Ostaszewski, "Managing The Tax Liability of a Property-Liability Insurance Company, Journal of Risk and Insurance, V64, No. 4, 695-711.
13. 1997, with J.D. Cummins, "Fuzzy Financial Pricing of Property-Liability Insurance", North American Actuarial Journal, V1, No. 4, 21-44 (October).
14. 1998, with P.L. Brockett and X. Xia, "Using Kohonen's Self-Organizing Feature Map to Uncover Automobile Bodily Injury Claims Fraud", Journal of Risk and Insurance, V65,

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- No. 2. 245-274.
15. 1998, with H.I. Weisberg, "Quantitative Methods for Detecting Fraudulent Automobile Bodily Injury claims", Risques, vol. 35, pp. 75-101, July-Sept.
  16. 1999, with K.M. Ostaszewski, "Fuzzy Sets Methodologies in Actuarial Science", Chapter 16, (pp. 531-553), Practical Applications of Fuzzy Technologies, Hans-Jurgen Zimmerman Eds, Kluwer Academic Publishers, Boston,(November).
  17. 2001, "Insurance Fraud and The Monday Effect in Workers Compensation Insurance", Assurances, 69:2, 183-201, July (winner of the RIMS 1998 Edith F. Lichota Award.).
  18. 2002, with P. L. Brockett, L.L. Golden, A. Levine, and M. Alpert, "Fraud Classification Using Principal Component Analysis RIDIT's", Journal of Risk and Insurance, Volume 69, (3), pp. 341-371, (winner of CAS prize for best JRI paper in 2002).
  19. 2002, with K.M. Ostaszewski, and G.A. Rempala, "Applications of Resampling Methods in Actuarial Practice", 2000 Proceedings of the Casualty Actuarial Society, Volume 87, No. 166, pp. 322-364.
  20. 2002, Comments on Chapters 2 (Automobile Insurance Regulation: The Massachusetts Experience) and 3 (Private Passenger Auto Insurance in New Jersey) in Deregulating Property-Liability Insurance, J. David Cummins editor, Brookings Institute Press, Washington, D.C.
  21. 2002, with M. Sequi-Gomez, L. Liu, and A. Abtahi, "The Effect of Population Safety Belt Usage Rates on Motor Vehicle-Related Fatalities", Accident Analysis and Prevention, Volume 34 (1), pp. 101-110.
  22. 2002, with S. Viaene, B. Baesens and G. Dedene, "A Comparison of State-of-the-Art Classification Techniques for Expert Automobile Insurance Fraud Detection", Journal of Risk and Insurance, Volume 69, (3), pp. 373-421.
  23. 2002, "Insurance Fraud", Journal of Risk and Insurance, Volume 69, (3), pp. 271-287.
  24. 2002, with V. Zicko, "Prosecuting Insurance Fraud – A Case Study of the Massachusetts Experience in the 1990's", Risk Management and Insurance Review, Volume 5, (2), pp. 77-104.
  25. 2004, with H. Weisberg, "Determinants of Total Compensation for Auto Bodily Injury Liability Under No-Fault: Investigation, Negotiation and the Suspicion of Fraud", Insurance and Risk Management, Volume 71, (4), pp. 633-662.
  26. 2003, with S. Viaene, and G. Dedene, "Illustrating the Explicative Capabilities of Bayesian Learning Neural Networks for Auto Claim Fraud Detection", Intelligent Techniques in

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- the Insurance Industry, Theory and Applications, Chapter 10, pp. 365-399., A. Shapiro and J. Lakhmi Eds. World Scientific.
27. 2004, with E. Orr, “Equity Risk Premium: Expectations Great and Small”, North American Actuarial Journal, Volume 8, pp. 45-69.
28. 2004, with S. Viaene, and G. Dedene, “A Case Study of Boosting Naïve Bayes for Claim Fraud Diagnosis”, IEEE Transactions on Knowledge and Data Engineering, Volume 16 (5), pp. 612-620, IEEE Computer Society.
29. 2004, with K. Ostaszewski, “Fuzzy Set Theory”, Encyclopedia of Actuarial Science, Chapter 10, Probability Theory, J. Teugels and B. Sundt, Eds., Wiley Publishers.
30. 2005, with E. Orr, Discussion of “Equity Risk Premium: Expectations Great and Small”, Author’s Reply, North American Actuarial Journal, Volume 9, (1) pp. 120-126.
31. 2005, with G.A. Rempala, “Modeling Hidden Exposures in Claim Severity via the EM Algorithm”, North American Actuarial Journal, Volume 9 (2) pp. 108-128.
32. 2007, Book Review of Tackling Insurance Fraud: Law and Practice, D. Morse and K. Skalan, Risk Management and Insurance Review, Volume 10 (1), pp. 175-178.
33. 2008, with K.M. Ostaszewski, “Insurance Pricing”, Chapter 20, Handbook of Probability: Theory and Applications, Tomas Rudas, Editor, Sage Publications.
34. 2008, with L. Francis, “Distinguishing the Forest from the Trees: A Comparison of Tree Based Data Mining Methods”, VARIANCE, Volume 2 (2), pp. 184-208.
35. 2010, with S.P. D’Arcy and H.I. Weisberg, “The Economics of Insurance Fraud Investigation: Evidence of a Nash Equilibrium”, VARIANCE, Volume 4 (2), pp170-190.



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### **PAPERS** (*Conferences, Rate Hearings and Non-Reviewed Publications*)

1. 1978, "The Use of Mathematical Models and Massachusetts Private Passenger Automobile Ratemaking Proposals for 1978," Massachusetts Automobile Insurance Rate Hearings.
2. 1979, "Comments on the Distribution of Premium for Massachusetts Private Passenger Automobile Rates for 1979," Massachusetts Automobile Insurance Rate Hearings.
3. 1982, with A.H. Callaghan, Jr., "Position Paper on Surplus" and "Position Paper on the Risk and Reward for Underwriting," Massachusetts Workers' Compensation Rate Hearings.
4. 1982, "Discussion: Stephen A. Ross and Alan Kraus, 'The Determination of Fair Profits for the Property-Liability Insurance Firm'," Geneva Association/Heubner Foundation, London, England.
5. 1984, "An Aspect of Pricing Risk: Lessons from Massachusetts," NCCI Conference on Economic Issues in Workers' Compensation, New York, New York.
6. 1986, "The Applicability of The Stable Laws in Collective Risk Theory and Practice," with A.S. Paulson, R.V.S. Deekshit, and G.W. Ulseth, working paper.
7. 1987, "Investment Income, Underwriting Profit and Contingencies: Financial Models." Casualty Actuarial Society Seminar on Ratemaking, Philadelphia, Pennsylvania.
8. 1988, with Sholom Feldblum, "Investment Income, Underwriting Profit and Contingencies: Financial Models" Casualty Actuarial Society Forum, Fall.
9. 1988, "Investment Income, Underwriting Profit Including the Tax Reform Act of 1986 and Contingencies: Financial Models." Casualty Actuarial Seminar on Ratemaking, Boston, Massachusetts.
10. 1989, "Investment Income, Underwriting Profit Including the Tax Reform Act of 1986 and Contingencies: Financial Models." Casualty Actuarial Seminar on Ratemaking, Dallas, Texas.
11. 1990, "The Development of Property-Liability Insurance Pricing Models in the United States 1969-1989," Proceedings of 1st AFIR International Colloquium, Paris, France.
12. 1991, with H.I. Weisberg, "Modeling the Payment of General Damages for Massachusetts Automobile Bodily Injury Liability Claims", working paper, American Risk and Insurance Association, San Diego, California.
13. 1993, with H.I. Weisberg, "Pricing Auto No-Fault and Bodily Injury Liability Coverages Using Micro-Data and Statistical Models" Casualty Actuarial Society, 1993 Ratemaking Call Paper Program - First Prize Paper, (March).
14. 1994, with N.R. Patel, "Regression Techniques for Small Samples and Rare Events", Casualty Actuarial Society Annual Meeting, Boston, (May).

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15. 1995, with K.M. Ostaszewski, "The Fuzzy Problem of Hedging the Tax Liability of a Property-Liability Insurance Company" Proceedings of the Fifth AFIR International Colloquium, V.1, 17-42, Brussels, (September).
16. 1995, with H.I. Weisberg, "Identification and Investigation of Suspicious Claims", A Report on the AIB Study of 1993 Claims, Massachusetts Division of Insurance DOI R95-12, (July).
17. 1996, with H.I. Weisberg, "Coping with the Influx of Suspicious Strain and Sprain Claims", A Report on the AIB Study of 1993 Personal Injury Protection and Bodily Injury Liability Claims, Massachusetts Division of Insurance DOI R96-36, (July).
18. 1997, with H.I. Weisberg, "AIB PIP Claim Screening Experiment Interim Report - Understanding and Improving the Claim Investigation Process", Massachusetts Division of Insurance DOI R97-37, (July).
19. 1998, with H.I. Weisberg, "AIB PIP Claim Screening Experiment Final Report - Understanding and Improving the Claim Investigation Process", Massachusetts Division of Insurance DOI R98-41, (July).
20. 1999, "Patterns, The New Data To Manage", Contingencies, September/October.
21. 2001, "Are We All Buckled Up Yet?", Contingencies, July/August, 2001, pp. 58-63.
22. 2003, with H. Weisberg, "Auto Bodily Injury Claim Settlement in Massachusetts, Final Results of the Claim Screen Experiment", AIB Working Paper.
23. 2004, "The Settlement Negotiation Process for Automobile Bodily Injury Liability Claims in the Presence of Suspicion of Fraud and Build-Up", presented at Risk Theory Society, New York, NY, April.
24. 2005, with S.P. D'Arcy and H.I. Weisberg, "The Economics of Insurance Fraud Investigation: Evidence of a Nash Equilibrium", presented at NBER Conference, Cambridge, MA, February.
25. 2006, with G. Rempala, "A Statistical Analysis of the Effect of Anchoring in the Negotiation Process of Automobile Bodily Injury Liability Insurance Claims", Department of Insurance and Risk Management, Wharton School, University of Pennsylvania, Faculty Seminar, March.
26. 2006, with L. Francis, "Distinguishing the Forest from the TREES: A Comparison of Tree Based Data Mining Methods", Casualty Actuarial Society Forum, Winter, 2006 Edition, pp. 1-49.
27. 2006, with L. Francis, "Comparison of Methods and Software for Modeling Nonlinear Dependencies: A Fraud Application", International Congress of Actuaries, Paris, May.

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### PROFESSIONAL PRESENTATIONS

- Universities:** Seminars: University of Pennsylvania, February 1985; April 1987; February 1990; October 1991; February 1994; April 1994; November 1995; May 1996; October 1998; April 2002; December 2003; March 2006; October 2008. University of Texas, February 1990; November 1991; November 1994; November 1995; November 2003; March 2004; March 2008; November 2009. University of Illinois, March 1991, December, 2005. Hamburg University, June 1991. University of Tel Aviv, March 1993. Brigham Young University, 1993. Georgia State University, November, 1995. University of Louisville, April, 1996; March, 1999; April, 2000; 2005. University of Minnesota, November 1996; April 2000, April 2004. University of Barcelona, April 1998. Louisiana State University, March 2000. Baylor University, March 2001; November 2003; March 2008. Illinois State University, 2002; Temple University, 2002; October 2008. Katholieke Universiteit Leuven, Belgium, 2002. Brown University, 2003. University of Wisconsin, March 2004. University of Alabama, October, 2004. Externado University of Bogota, Columbia, November, 2005. University of Connecticut, September 2008, April 2012. University of Montreal, June 2008, University of Warsaw, Poland, September 2010.
- Professional Societies:** Casualty Actuarial Society: (58), 1987-2012; American Risk and Insurance Association (14), 1985-2011; (14), 1987-2008. International Association of Insurance Fraud Agencies (IAIFA), (8), 1992-2007; International Actuarial Association, (4), 1990-1995; Coalition Against Insurance Fraud, (3) 1993-2000; Society of Actuaries, (2) 2000-2002, International Congress of Mathematicians, 1986; Society of Insurance Research, 1987, 2007; The Society of CPCU, 1991; American Insurance Association, 1992; International Insurance Society, 1992; Risk Theory Society (3), 2000, 2004, 2006; Actuaries Club of Boston, 2000; Casualty Actuaries of New England, 2003, 2007, 2008, 2012. Western Risk and Insurance Association, 2004; National Bureau of Economic Research 2004, 2005; ASTIN, 2004, Asia Pacific Risk and Insurance Association, 2004. World Risk and Insurance Congress, 2005.
- Industry Groups:** National Council on Compensation Insurance, (2) 1984-1992; Commonwealth Automobile Reinsurers, (2) 1990-1992; International Conference on Insurance, Solvency and Finance, (5) 1986-1997; Insurance Data Management Association (IDMA), (2), 1993-1999; Insurance Fraud Bureau, (2) 2002-2003; National Association of Independent Insurers, 1979; Conference on Strategic Planning for Insurance, 1982; Workers' Compensation Organizations, 1983; Institute of Actuaries (UK), 1988; Guaranty Fund Management Services Workshop, 1991; NCCI Issues in Workers Compensation Insurance, 1991; The Office of Attorney General and The Insurance Fraud Bureau of Massachusetts, 1992-2003; Canadian Insurance Congress, 1993; Kentucky Workers' Compensation Funding Commission, 1993; Associacao Portuguesa de Seguradores, 1996; College of Insurance, 1997; Business Strategy Network, 1997; National Association of Insurance Commissioners Fraud Study, 1999; The Insurance Accounting & System Association's Annual Educational Conference and Business Show, 2000; AEI-Brookings Joint Center for Regulatory Studies, 2001; Insurance Research Council (IRC), 2001; State of Connecticut Insurance Department, 2002, International Association of Insurance Fraud Agencies (8) 1992-2007; Association of Korean Insurers, 2004; FFSA Conference of Risk and Insurance Economics, Paris, 2005; International Fraud Conference, Bogota, Colombia, 2005. ISOTECH, Insurance Services Office, 2007. PCI Seminar, New Orleans, 2007