VITA: Virginia R. Young

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EDUCATION HISTORY

BA   Cumberland College, Williamsburg, Kentucky; Mathematics; May 1981.

PhD   University of Virginia; Algebraic topology; May 1984.
Thesis: *Branched coverings arising from group actions*
Advisor: Robert E. Stong

Postdoctorate Institute for Advanced Study, Princeton; Aug 1984 to May 1986.

FSA   Fellow of the Society of Actuaries; Sept 1992.

CAREER HISTORY

Teaching Asst   University of Virginia, Dept of Math; Aug 1982 to May 1994
–taught calculus sequence and graded for graduate topology.

Assistant Prof   Cumberland College, Williamsburg, Kentucky, Dept of Math;
Aug 1986 to May 1989.
Associate Prof   May 1989 to May 1990.
–taught a broad range of math courses–14 to 20 hours per semester.

Actuary   Wausau Insurance Cos, Wausau, Wisconsin; May 1990 to July 1993.
–priced group health and workers compensation insurance.

Assistant Prof   U of Wisconsin-Madison, Sch of Business; Aug 1993 to June 1999.
Associate Prof   U of Wisconsin-Madison, Sch of Business; June 1999 to Sept 2003.
–taught and researched in actuarial mathematics.

Professor   U of Michigan, Dept of Math; Sept 2003 to present.
–teach and research in actuarial mathematics. My research interests
include insurance economics, pricing insurance risks using
non-additive measures, and individual financial and insurance
decision making.

SPECIAL HONORS AND AWARDS

G. T. Whyburn Fellow, University of Virginia; June 1981 to May 1982.

President's Fellow, University of Virginia; June 1981 to May 1984.

NSF Fellowship for Postdoctoral Study in Mathematics at the Institute for Advanced Study, Princeton; August 1984 to May 1986.

Winner of the L. Ronald Hill Memorial Prize (1994) for my paper "The application of fuzzy sets to group health underwriting."

Co-winner of the Edward Lew Award (1998) for the papers "Forecasting Social Security actuarial assumptions," written with Edward W. Frees, Yueh-Chuan Kung, Majorie A. Rosenberg, and Siu-Wai Lai; and "A longitudinal data analysis interpretation of credibility models," written with Edward W. Frees and Yu Luo. The Society of Actuaries gives the Edward Lew Award for the best paper in modeling in actuarial mathematics.

Co-winner of the annual Halmstad Prize (1999) for the paper "Forecasting Social Security actuarial assumptions," written with Edward W. Frees, Yueh-Chuan Kung, Majorie A. Rosenberg, and Siu-Wai Lai. The Actuarial Education and Research Fund awards the Halmstad Prize for the best paper in actuarial mathematics.

Ethel M. and Cecil J. Nesbitt Professor of Actuarial Mathematics, University of Michigan, September 2003 to present.

REFEREED RESEARCH PUBLICATIONS

1. Virginia R. Young (1985), Unoriented branched coverings arising from group actions, *Proceedings of the American Mathematical Society*, 93: 525-531.

2. Virginia R. Young (1985), Free Z_p and S^1 actions, *Indiana University Mathematics Journal*, 34: 607-617.

3. Virginia R. Young (1993), The application of fuzzy sets to group health underwriting, with discussion, *Transactions of the Society of Actuaries*, 45: 551-590.

4. Virginia R. Young (1996), Fuzzy subsethood, *Fuzzy Sets and Systems*, 77: 371-384.

5. Virginia R. Young (1996), Credibility and persistency, *ASTIN Bulletin*, 26: 53-69.

6. Virginia R. Young (1996), Insurance rate changing: A fuzzy logic approach, *Journal of Risk and Insurance*, 63: 461-483.

7. Edward W. Frees, Yueh-Chuan Kang, Marjorie A. Rosenberg, Virginia R. Young, and Siu-Wai Lai (1997), Forecasting Social Security actuarial assumptions, *North American Actuarial Journal*, 1 (4): 49-82.

8. Virginia R. Young (1997), Credibility using a loss function from spline theory, *Scandinavian Actuarial Journal*, 1997 (2): 160-185.

9. Shaun S. Wang, Virginia R. Young, and Harry H. Panjer (1997), Axiomatic characterization of insurance prices, *Insurance: Mathematics and Economics*, 21 (2): 173-183.

10. Virginia R. Young and Mark J. Browne (1997), Explaining insurance policy provisions via adverse selection, *Geneva Papers on Risk and Insurance Theory*, 22: 121-134.

11. Virginia R. Young (1997), Credibility using semiparametric models, *ASTIN Bulletin*, 27: 273-285.

12. Virginia R. Young (1997), Adjusting indicated insurance rates: Fuzzy rules that consider statistical data, *Proceedings of the Casualty Actuarial Society*, 84: 734-765.

13. Virginia R. Young and Shaun S. Wang (1998), Updating non-additive measures with fuzzy information, *Fuzzy Sets and Systems*, 94: 355-366.

14. Virginia R. Young (1998), Credibility using a loss function from spline theory: Parametric models with a one-dimensional sufficient statistic, with discussion, *North American Actuarial Journal*, 2: 101-117.

15. Shaun S. Wang and Virginia R. Young (1998), Ordering risks: Expected utility theory versus Yaari's dual theory of risk, *Insurance: Mathematics and Economics*, 22: 145-161.

16. Shaun S. Wang and Virginia R. Young (1998), Risk-adjusted credibility premiums using distorted probabilities, *Scandinavian Actuarial Journal*, 1998: 143-165.

17. Virginia R. Young (1998), Families of update rules for non-additive measures: Applications in pricing risks, *Insurance: Mathematics and Economics*, 23: 1- 14.

18. Virginia R. Young (1998), Robust Bayesian credibility using semiparametric models, *ASTIN Bulletin*, 28: 187-203.

19. Marjorie A. Rosenberg and Virginia R. Young (1999), A Bayesian approach to understanding time series data, *North American Actuarial Journal*, 3: 130-143.

20. Edward W. Frees, Virginia R. Young, and Yu Luo (1999), A longitudinal data analysis interpretation of credibility models, *Insurance: Mathematics and Economics*, 24: 229-247.

21. Virginia R. Young (1999), Optimal insurance under Wang's premium principle, *Insurance: Mathematics and Economics*, 25: 109-122.

22. Virginia R. Young (1999), Discussion of Christofides' conjecture regarding Wang's premium principle, *ASTIN Bulletin*, 29: 191-195.

23. Virginia R. Young (2000), Credibility using semiparametric models and a loss function with a constant penalty, *Insurance: Mathematics and Economics*, 26: 151-156.

24. S. David Promislow and Virginia R. Young (2000), Equity and exact credibility, *ASTIN Bulletin*, 30: 3-11.

25. Virginia R. Young and Thaleia Zariphopoulou (2000), Computation of distorted probabilities for diffusion processes via stochastic control methods, *Insurance: Mathematics and Economics*, 27: 1-18.

26. S. David Promislow and Virginia R. Young (2000), Equity and credibility, *Scandinavian Actuarial Journal*, 2000: 121-146.

27. Jan Dhaene, Shaun S. Wang, Virginia R. Young, and Marc Goovaerts (2000), Comonotonicity and maximal stop-loss premiums, *Bulletin of the Swiss Actuarial Association*, 2000: 99-113.

28. Virginia R. Young and Mark J. Browne (2000), Equilibrium in competitive insurance markets under adverse selection and Yaari's dual theory of risk, *Geneva Papers on Risk and Insurance Theory*, 25: 141-157.

29. Edward W. Frees, Virginia R. Young, and Yu Luo (2001), Credibility ratemaking using panel data models, *North American Actuarial Journal*, 5: 24-42.

30. Virginia R. Young and Thaleia Zariphopoulou (2002), Pricing dynamic insurance risks using the principle of equivalent utility, *Scandinavian Actuarial Journal*, 2002 (4): 246-279.

31. S. David Promislow and Virginia R. Young (2002), Measurement of relative inequity and Yaari's dual theory of risk, *Insurance: Mathematics and Economics*, 30 (1): 95-109.

32. S. David Promislow and Virginia R. Young (2003), Decomposition properties of dual choice functionals, *Social Choice and Welfare*, 20 (2): 189-201.

33. Virginia R. Young (2003), Equity-indexed life insurance: Pricing and reserving using the principle of equivalent utility, *North American Actuarial Journal*, 7 (1): 68-86.

34. Kristen S. Moore and Virginia R. Young (2003), Pricing equity-linked pure endowments via the principle of equivalent utility, *Insurance: Mathematics and Economics*, 33 (3): 497-516.

35. Virginia R. Young (2004), Pricing in an incomplete market with an affine term structure, *Mathematical Finance*, 14 (3): 359-382.

36. Yu Luo, Virginia R. Young, and Edward W. Frees (2004), Credibility ratemaking using collateral information, *Scandinavian Actuarial Journal*, 2004 (6): 448-461.

37. Virginia R. Young and Thaleia Zariphopoulou (2004), Pricing insurance via stochastic control: Optimal consumption and terminal wealth, *Finance*, 25: 141-155.

38. Virginia R. Young (2004), Optimal investment strategy to minimize the probability of lifetime ruin, *North American Actuarial Journal*, 8 (4): 105-126.

39. Kristen S. Moore and Virginia R. Young (2005), Optimal design of a perpetual equity-indexed annuity, *North American Actuarial Journal*, 9 (1): 57-72.

40. Sebastian Jaimungal and Virginia R. Young (2005), Pricing equity-linked pure endowments with risky assets that follow Lévy processes, *Insurance: Mathematics and Economics*, 36 (3): 329-346.

41. S. David Promislow and Virginia R. Young (2005), Unifying framework for optimal insurance, *Insurance: Mathematics and Economics*, 36 (3): 347-364.

42. S. David Promislow and Virginia R. Young (2005), Minimizing the probability of ruin when claims follow Brownian motion with drift, *North American Actuarial Journal*, 9 (3): 109-128.

43. S. David Promislow and Virginia R. Young (2005), Supermodular functions on finite lattices, *Order*, 22 (4): 389-413.

44. Moshe A. Milevsky, Kristen S. Moore, and Virginia R. Young (2006), Asset allocation and annuity-purchase strategies to minimize the probability of financial ruin, *Mathematical Finance*, 16 (4): 647-671.

45. Kristen S. Moore and Virginia R. Young (2006), Optimal insurance in a continuous-time model, *Insurance: Mathematics and Economics*, 39 (1): 47-68.

46. Kristen S. Moore and Virginia R. Young (2006), Optimal and simple, nearly-optimal rules for minimizing the probability of financial ruin in retirement, *North American Actuarial Journal*, 10 (4): 145-161.

47. Moshe A. Milevsky, S. David Promislow, and Virginia R. Young (2006), Killing the law of large numbers: Mortality risk premiums and the Sharpe ratio, *Journal of Risk and Insurance*, 73 (4): 673-686.

48. Erhan Bayraktar and Virginia R. Young (2007), Hedging life insurance with pure endowments, *Insurance: Mathematics and Economics*, 40 (3): 435-444.

49. Moshe A. Milevsky and Virginia R. Young (2007), The timing of annuitization: Investment dominance and mortality risk, *Insurance: Mathematics and Economics*, 40: 135-144.

50. Erhan Bayraktar and Virginia R. Young (2007), Minimizing the probability of lifetime ruin under borrowing constraints, *Insurance: Mathematics and Economics*, 41 (1): 196-221.

51. Moshe A. Milevsky and Virginia R. Young (2007), Annuitization and asset allocation, *Journal of Economic Dynamics and Control*, 31 (9): 3138-3177.

52. Erhan Bayraktar and Virginia R. Young (2007), Correspondence between lifetime minimum wealth and utility of consumption, *Finance and Stochastics*, 11 (2): 213-236.

53. Michael Ludkovski and Virginia R. Young (2008), Indifference pricing of pure endowments and life annuities under stochastic hazard and interest rates, *Insurance: Mathematics and Economics*, 42 (1): 14-30.

54. Erhan Bayraktar and Virginia R. Young (2008), Pricing options in incomplete equity markets via the instantaneous Sharpe ratio, *Annals of Finance*, 4 (4): 399-429.

55. Virginia R. Young (2008), Pricing life insurance via the instantaneous Sharpe ratio, *Insurance: Mathematics and Economics*, 42 (2): 691-703.

56. Masahiko Egami and Virginia R. Young (2008), Indifference prices of structured catastrophe (CAT) bonds, *Insurance: Mathematics and Economics*, 42 (2): 771-778.

58. Erhan Bayraktar and Virginia R. Young (2008), Mutual fund theorems when minimizing the probability of lifetime ruin, *Finance Research Letters*, 5 (2): 69-78.

58. Erhan Bayraktar and Virginia R. Young (2008), Maximizing utility of consumption subject to a constraint on the probability of lifetime ruin, *Finance Research Letters*, 5 (4): 204-212.

59. Erhan Bayraktar, Kristen S. Moore, and Virginia R. Young (2008), Minimizing the probability of lifetime ruin under random consumption, *North American Actuarial Journal*, 12 (4): 384-400.

60. Erhan Bayraktar and Virginia R. Young (2008), Minimizing the probability of lifetime ruin when consumption is ratcheted, *North American Actuarial Journal*, 12 (4): 428-442.

61. Erhan Bayraktar, Moshe A. Milevsky, S. David Promislow, and Virginia R. Young (2009), Valuation of mortality risk via the instantaneous Sharpe ratio: applications to life annuities, *Journal of Economic Dynamics and Control*, 33 (3): 676-691.

62. Masahiko Egami and Virginia R. Young (2009), Optimal reinsurance strategy under fixed cost and delay, *Stochastic Processes and Their Applications*, 119 (3): 1015-1034.

63. Erhan Bayraktar and Virginia R. Young (2009), Minimizing the probability of lifetime ruin with deferred life annuities, *North American Actuarial Journal*, 13 (1): 141-154.

64. Erhan Bayraktar and Virginia R. Young (2009), Minimizing the lifetime shortfall or shortfall at death, *Insurance: Mathematics and Economics*, 44 (3): 447-458.

65. Michael Ludkovski and Virginia R. Young (2009), Optimal risk sharing under distorted probabilities with transaction costs, *Mathematics and Financial Economics*, 2 (2): 87-105.

66. Erhan Bayraktar and Virginia R. Young (2010), Optimal investment strategy to minimize occupation time, *Annals of Operations Research*, 176 (1): 389-408.

67. Michael Ludkovski and Virginia R. Young (2010), *Ex post* moral hazard and Bayesian learning in insurance, *Journal of Risk and Insurance*, 77 (4): 829-856.

68. Erhan Bayraktar and Virginia R. Young (2011), Proving the regularity of the minimal probability of ruin via a game of stopping and control, *Finance and Stochastics*, 15: 785-818.

69. Erhan Bayraktar, Xueying Hu, and Virginia R. Young (2011), Minimizing the probability of lifetime ruin under stochastic volatility, *Insurance: Mathematics and Economics*, 49 (2): 194-206.

70. Ting Wang and Virginia R. Young (2012), Optimal commutable annuities to minimize the probability of lifetime ruin, *Insurance: Mathematics and Economics*, 50 (1): 200-216.

71. Zhibin Liang and Virginia R. Young (2012), Dividends and reinsurance under a penalty for ruin, *Insurance: Mathematics and Economics*, 50 (3): 437-445.

72. Ting Wang and Virginia R. Young (2012), Maximizing the utility of consumption with commutable annuities, *Insurance: Mathematics and Economics*, 51 (2): 352-369.

73. Erhan Bayraktar and Virginia R. Young (2013), Life insurance purchasing to maximize utility of household consumption, *North American Actuarial Journal*, 17 (2): 114-135.

74. Erhan Bayraktar, S. David Promislow, and Virginia R. Young (2014), Purchasing life insurance to reach a bequest goal, *Insurance: Mathematics and Economics*, 58: 204-216.

75. Erhan Bayraktar, S. David Promislow, and Virginia R. Young (2015), Purchasing term life insurance to reach a bequest goal: time-dependent case, *North American Actuarial Journal*, 19 (3): 224-236.

76. Huaxiong Huang, Moshe A. Milevsky, and Virginia R. Young (2015), A glide path for target date fund annuitization, *Journal of Retirement*, 3(1), Summer 2015: 27-37.

77. Bahman Angoshtari, Erhan Bayraktar, and Virginia R. Young (2015), Minimizing the expected lifetime spent in drawdown under proportional consumption, *Finance Research Letters*, 15, November 2015: 106-114.

78. Kristen S. Moore and Virginia R. Young (2016), Minimizing the probability of lifetime ruin when shocks might occur: perturbation analysis, *North American Actuarial Journal*, 20 (1): 17-36.

79. Bahman Angoshtari, Erhan Bayraktar, and Virginia R. Young (2016), Optimal investment to minimize the probability of drawdown, *Stochastics*, 88 (6): 946-958.

80. Erhan Bayraktar, S. David Promislow, and Virginia R. Young (2016), Purchasing life insurance to reach a bequest goal while consuming, *SIAM Journal on Financial Mathematics*, 7 (1): 183-214.

81. Asaf Cohen and Virginia R. Young (2016), Minimizing lifetime poverty with a penalty for bankruptcy, *Insurance: Mathematics and Economics*, 69: 156-167.

82. Bahman Angoshtari, Erhan Bayraktar, and Virginia R. Young (2016), Minimizing the probability of lifetime drawdown under constant consumption, *Insurance: Mathematics and Economics*, 69: 210-223.

83. Ting Wang and Virginia R. Young (2016), Hedging pure endowments with mortality derivatives, *Insurance: Mathematics and Economics*, 69: 238-255.

84. Erhan Bayraktar and Virginia R. Young (2016), Optimally investing to reach a bequest goal, *Insurance: Mathematics and Economics*, 70: 1-10.

85. Virginia R. Young and Yuchong Zhang (2016), Lifetime ruin under ambiguous hazard rate, *Insurance: Mathematics and Economics*, 70: 125-134.

86. Huaxiong Huang, Moshe A. Milevsky, and Virginia R. Young (2017), Optimal purchasing of deferred income annuities when payout yields are mean-reverting, *Review of Finance*, 21 (1): 327-361.

87. Yelei Gu, David Kausch, Kristen S. Moore, and Virginia R. Young (2017), Balancing income and bequest goals in a DB/DC hybrid pension plan, *Journal of Retirement*, 4 (3): 51-62.

88. Dangping Li, Dongchen Li, and Virginia R. Young (2017), Optimality of excess-loss reinsurance under a mean-variance criterion, *Insurance: Mathematics and Economics*, 75: 82-89.

89. Virginia R. Young (2017), Purchasing casualty insurance to avoid lifetime ruin, *Insurance: Mathematics and Economics*, 77: 133-142.

90. Virginia R. Young (2017), Target-bequest investment and insurance fund, to appear in *North American Actuarial Journal*.

91. Xiaoqing Liang and Virginia R. Young (2017), Annuitization and asset allocation under exponential utility, to appear in *Insurance: Mathematics and Economics*.

UNREFEREED RESEARCH PUBLICATIONS

1. James C. Hickman and Virginia R. Young (1994), discussion of "Option pricing by Esscher transforms," by Hans U. Gerber and Elias S. W. Shiu, *Transactions of the Society of Actuaries*, 46: 99-140.

2. Virginia R. Young (1997), book review of *Practical Actuarial Credibility Models* (1996), by Dannenburg, D., R. Kaas, and M. J. Goovaerts, Institute of Actuarial Science and Econometric, University of Amsterdam, Amsterdam, The Netherlands. The review appeared in the *North American Actuarial Journal*, 1 (3): 66-68.

3. Virginia R. Young (1998), discussion of "Utility functions: From risk theory to finance," by Hans U. Gerber and Gérard Pafumi, *North American Actuarial Journal*, 2 (3): 74-100.

4. Virginia R. Young (2004), discussion of "Pricing perpetual fund protection with withdrawal option," by Gerber, Hans U. and Elias S. W. Shiu (2003), *North American Actuarial Journal*, 7 (2): 60-77; Discussions 77-92 and 8 (1) (2004): 96-99.

RESEARCH UNDER REVIEW

Dongchen Li and Virginia R. Young, "Maximizing expected utility of consumption with a constraint on expected time in poverty," submitted to *Annals of Operations Research*.

David Landriault, Bin Li, Danping Li, and Virginia R. Young, "Equilibrium strategies for the mean-variance investment problem over a random horizon," resubmitted to *SIAM Journal on Financial Mathematics*.

Zhibin Liang and Virginia R. Young, "Optimal dividends with an affine penalty," submitted to *ANZIAM Journal*.

Xiaoqing Liang and Virginia R. Young, "Minimizing the probability of lifetime ruin: two riskless assets with transaction costs, submitted to *Mathematics of Operations Research*.

Xiaoqing Liang and Virginia R. Young, "Minimizing the probability of ruin: optimal per-loss reinsurance," submitted to *Insurance: Mathematics and Economics*.

Xiaoqing Liang and Virginia R. Young, "Minimizing the probability of ruin: two riskless assets with transaction costs and proportional reinsurance," submitted to *Statistics and Probability Letters.*

RESEARCH IN PROGRESS

Bahman Angoshtari, Erhan Bayraktar, and Virginia R. Young, "Optimal dividends under a drawdown constraint."

Kristen S. Moore, Huajie Qian, and Virginia R. Young, "Optimal deductible insurance to minimize the probability of lifetime ruin: positive risk loading and random loss."

Dongchen Li and Virginia R. Young, "Minimizing the probability of Parisian ruin."

Danping Li and Virginia R. Young, "Mean-variance criterion over a random horizon, taking ruin into account."

Romuald Elie, Nicolas Hernandez, and Virginia R. Young, "Dynamic insurance under moral hazard."

Xia Han, Zhibin Liang, and Virginia R. Young, "Minimizing the probability of insurer drawdown via investment and reinsurance."

Zhibin Liang and Virginia R. Young, "Minimizing the probability of insurer ruin under a mean-variance reinsurance premium principle."

COURSES TAUGHT

At the University of Wisconsin-Madison, 1993-2003, I taught the following courses: Mathematical Analysis for masters students in business, Interest Theory, Life Contingencies, Risk Theory, Loss Distributions and Credibility, Intermediate Business Statistics (a course in regression and elementary time series), Decision Theory, Time Series Analysis, and Technical Risk Management.

At the University of Michigan, I taught the following courses:

Math 523-Risk Theory	Fall 2003	20 students
Math 528-Topics in Casualty Actuarial Math	Winter 2004	18 students
Math 523-Risk Theory	Fall 2004	26 students
Math 523-Risk Theory	Winter 2005	33 students
Math 520-Life Contingencies I	Fall 2005	19 students
Math 521-Life Contingencies II	Winter 2006	15 students
Math 523-Risk Theory	Winter 2006	35 students
Math 520-Life Contingencies I	Fall 2006	45 students
Math 521-Life Contingencies II	Winter 2007	43 students
Math 525-Probability	Winter 2008	25 students
Math 520-Life Contingencies I	Fall 2008	55 students
Math 521-Life Contingencies II	Winter 2009	49 students

Math 526-Stochastic Processes	Fall 2009	14 students
Math 423-Mathematics of Finance	Spring 2010	25 students
Math 520-Life Contingencies I	Fall 2010	39 students
Math 521-Life Contingencies II	Winter 2011	34 students
Math 423-Mathematics of Finance	Spring 2011	27 students
Math 423-Mathematics of Finance	Fall 2011	25 students
Math 520-Life Contingencies I	Fall 2011	41 students
Math 423-Mathematics of Finance	Spring 2012	25 students
Math 423-Mathematics of Finance	Fall 2012	33 students
Math 520-Life Contingencies I	Fall 2012	30 students
Math 423-Mathematics of Finance	Spring 2013	28 students
Math 424-Theory of Interest	Fall 2013	20 students
Math 523-Risk Theory	Fall 2013	28 students
Math 523-Loss Models I	Fall 2014	31 students
Math 524-Loss Models II	Winter 2015	10 students
Math 520-Life Contingencies I	Fall 2015	57 students
Math 523-Loss Models I	Fall 2016	29 students
Math 521-Life Contingencies I	Winter 2018	34 students

PhD COMMITTEES

1995	Siu-Wai	Statistics, UW-Madison
1996	Jyun-Cheng Wang	Management Information Systems, UW-Madison
1996	Hsiao-Ping Yeh	Industrial Engineering, UW-Madison
1997	Ming-Li Chen	Mathematics, UW-Madison
1998	Emiliano Valdez	Actuarial Science and Risk Management, UW-Madison
1998	Tzu-Tsung Wong	Industrial Engineering, UW-Madison
1998	Chia-Nan Chu	Industrial Engineering, UW-Madison
2000	Hsui-An Lin	Actuarial Science and Risk Management, UW-Madison
2000	Yu Luo (co-advisor)	Actuarial Science and Risk Management, UW-Madison
2001	Jihhwa Kim	Operations and Information Systems, UW-Madison
2001	Wenjiu Liu	Actuarial Science and Risk Management, UW-Madison
2002	Mohsen Mazaheri	Finance, UW-Madison
2002	Yanyun Zhu (advisor)	Actuarial Science and Risk Management, UW-Madison
2005	Jungmin Choi	AIM, Department of Mathematics, U of M
2005	Jim Brown	Department of Mathematics, U of M
2006	Hyekyung Min	AIM, Department of Mathematics, U of M
2008	Bo Yang	Department of Mathematics, U of M
2009	Hao Xing	Department of Mathematics, U of M
2011	Ting Wang (advisor)	AIM, Department of Mathematics, U of M
2011	Xueying Hu	Department of Mathematics, U of M
2012	Ashley Selegue Holland (advisor)	AIM, Department of Mathematics, U of M

2012	Jeremy Crosmer (DMA)	School of Music, U of M
2013	Matthew Zalkind (DMA)	School of Music, U of M
2014	Britton Riley (DMA)	School of Music, U of M
2015	Zhou Zhou	Department of Mathematics, U of M
2015	Yuchong Zhang	Department of Mathematics, U of M
2017	Roman Gyaduk	Department of Mathematics, U of M
2017	Alexander Munk	Department of Mathematics, U of M

DEPARTMENTAL AND UNIVERSITY SERVICE

Fall 1995-Fall 1996	Awards Committee, School of Business, UW-Madison
Fall 1995-Spring 2003	Quantitative Reasoning Committee, UW-Madison
Fall 1996-Spring 1999	Faculty Employee Benefits and Compensation Commission, UW-Madison
Fall 1997-Spring 1999	Budget Planning and Analysis Joint Subcommittee, UW-Madison
Fall 1997-Spring 1999	Research Committee, School of Business, UW-Madison
Fall 2000-Spring 2002	Research Committee, School of Business, UW-Madison
Fall 2000-Spring 2001	Faculty Employee Benefits and Compensation Commission, UW-Madison
Fall 2001-Spring 2002	Ph.D. Committee, School of Business, UW-Madison
Winter 2004	3-Year Review Committee, Kristen Moore, Math, U of Michigan
Winter 2004	3-Year Review Committee, Mattias Jonsson, Math, U of Michigan
Fall 2004	Tenure Review Committee, Mattias Jonsson, Math, U of Michigan
Fall 2004-Winter 2006	PhD Admissions Committee, Math, U of M
Fall 2004-Winter 2006	Masters Committee, Math, U of M
Fall 2004-Winter 2007	AIM PhD Committee, Math, U of M
Fall 2005-Winter 2010	Long-Range Planning Committee, Math, U of M
Fall 2006-Winter 2008	Executive Committee, Math, U of M
Fall 2009	Tenure Review Committee, Erhan Bayraktar, Math, U of M
Fall 2010-Winter 2011	Personnel Committee, Math, U of M
Fall 2012-Winter 2014	Provost's Advisory Committee for Budgetary Affairs, U of M
Fall 2013-Winter 2014	Area Leader for Financial and Actuarial Mathematics, Math, U of M
Fall 2007 to present	Undergraduate Advisor, Math, U of M

RECENT PROFESSIONAL SERVICE

Member of Education and Research Section Council, SoA, Fall 1993 to Fall 1996, Fall 2001 to Fall 2004; Vice-chair of Research, Fall 1994 to Fall 1996; Newsletter editor, Fall 2003 to Fall 2004.

Member of the Committee for Knowledge Extension and Research, SoA, Fall 1994 to Fall 2013; Vice-chair, Fall 1997 to Fall 2013.

Associate Editor, *Insurance: Mathematics and Economics*, Fall 2000 to present.

Member of the Grants Committee for Centers of Actuarial Excellence, SoA, Fall 2012 through 2015; Vice-chair, Fall 2014 through 2015.

PROFESSIONAL MEMBERSHIP

Member, Society of Actuaries.