KRISTEN S. MOORE

Department of Mathematics
University of Michigan
530 Church Street
Ann Arbor, MI 48109-1043

phone: 734 615 6864
fax: 734 763 0937
ksmoore@umich.edu
www.math.lsa.umich.edu/~ksmoore

EDUCATION AND EMPLOYMENT HISTORY

- *Associate Professor,* Department of Mathematics, University of Michigan (September 2007 – present)
- *Assistant Professor,* Department of Mathematics, University of Michigan (September 2001 – August 2007)
- *Three-year Assistant Professor,* Department of Mathematics, University of Michigan (September 1999 – August 2001)
- *Ph.D. in Mathematics,* University of Connecticut, Advisor: P.J. McKenna (June 1999)
- *M.S. in Mathematics*, University of Connecticut (June 1996)
- *Associate of the Society of Actuaries* (1992); Passed the SOA examinations for Courses 5 and 6 (2003); Passed the Fundamentals of Actuarial Practice Module 6 (2009)
- *Actuarial Associate,* CIGNA Companies, Hartford, CT (1990-1994)
- *B.S. in Mathematics*, Magna Cum Laude, Bucknell University (June 1990)

PUBLICATIONS

Actuarial and Financial Mathematics

[1] K. S. Moore and V. R. Young. Pricing equity-linked endowments via the principle of equivalent utility. *Insurance: Mathematics and Economics,* **33** (2003), no. 3, 497-516.

[2] K. S. Moore and V. R. Young. Optimal design of a perpetual equity-indexed annuity. *North American Actuarial Journal*, **9** (2005), no. 1, 57-72.

[3] M. A. Milevsky, K. S. Moore, and V. R. Young. Asset allocation and annuity-purchase strategies to minimize the probability of financial ruin. *Mathematical Finance,* **16** (2006), no.4, 647-671.

[4] K. S. Moore and V. R. Young. Optimal insurance in a continuous-time model. *Insurance: Mathematics and Economics,* **39** (2006), no.1, 47-68.

[5] K. S. Moore and V. R. Young. Optimal and simple, nearly-optimal rules for minimizing the probability of ruin in retirement. *North American Actuarial Journal*, **10** (2006), no. 4, 145-161.

[6] K. S. Moore. Optimal surrender strategies for equity-indexed annuity investors. *Insurance: Mathematics and Economics,* 44 (2009), no. 1, 1-18.

[7] E. Bayraktar, K. S. Moore, and V. R. Young. Minimizing the probability of lifetime ruin under random consumption. *North American Actuarial Journal,* **12** (2008), no. 4, 384-400.

[8] K. S. Moore and V. R. Young. *Optimal annuitization under a threat of annuity default,* in progress.

[9] K. S. Moore and V. R. Young. Minimizing the Probability of Lifetime Ruin When Shocks Might Occur, *North American Actuarial Journal*, 20 (2016), no. 1, 17-36.

[10] Y. Gong, Z. Li, M. Milazzo, K. Moore, and M. Provencher. Credibility Methods for Individual Life Insurance, in progress.

[11] H. Avery, K. Moore, K. S. Schmidt, T. Schleisman, and X. Wu. Predicting Life Insurer Financial Impairment Using Random Forest Classification, in progress.

Department of Mathematics
University of Michigan
530 Church Street
Ann Arbor, MI 48109-1043

phone: 734 615 6864
fax: 734 763 0937
ksmoore@umich.edu
www.math.lsa.umich.edu/~ksmoore

PUBLICATIONS (Continued)

[12] G. Gu, D. Kausch, K. S. Moore, and V.R. Young. "Hybrid pension plans: Choosing the right blend of DB and DC," in preparation.

Nonlinear Dynamics

[13] P. J. McKenna and K. S. Moore. Mathematics arising from suspension bridge dynamics: recent developments. *Jahresbericht der Deutschen Mathematiker-Vereinigung,* **101** (1999), no. 4, 178-195.

[14] P. J. McKenna and K. S. Moore. Multiple periodic solutions to a suspension bridge ordinary differential equation. *Proceedings of the Conference on Nonlinear Differential Equations (Coral Gables, FL, 1999), Electronic Journal of Differential Equations Conference*, **5** (2000) 183-199.

[15] K. S. Moore. Large torsional oscillations in a suspension bridge: multiple periodic solutions to a nonlinear wave equation. *SIAM Journal on Mathematical Analysis,* **33** (2002), no. 6, 1411-1429.

[16] P. J. McKenna and K. S. Moore. The global structure of periodic solutions of a suspension bridge mechanical model. *IMA Journal of Applied Mathematics,* **67** (2002), no. 5, 459-478.

[17] N. Ben-Gal and K. S. Moore. Bifurcation and stability properties of periodic solutions to two nonlinear spring-mass systems. *Nonlinear Analysis. Theory, Methods and Applications*, **61** (2005), no. 6, 1015-1030.

[18] N. Ben-Gal and K. S. Moore. *Constructing the Bounded Attractor for Asymptotically Asymmetric Slowly Non-Dissipative PDEs*, in progress.

Singular Elliptic Problems

[16] S. Hill and K. S. Moore. An existence theorem for a quasilinear elliptic boundary value problem with boundary blowup. *Nonlinear Analysis. Theory, Methods, and Applications*, **38** (1999), no. 8, 951-958.

[17] S. Hill, K. S. Moore, and W. Reichel. Existence and uniqueness theorems for quasilinear elliptic boundary value problems. *Proceedings of the American Mathematical Society*, **128** (2000), no. 6, 1673-1683.

KRISTEN S. MOORE

Department of Mathematics
University of Michigan
530 Church Street
Ann Arbor, MI 48109-1043

phone: 734 615 6864
fax: 734 763 0937
ksmoore@umich.edu
www.math.lsa.umich.edu/~ksmoore

FUNDING

- *Centers of Actuarial Excellence Grant*, Society of Actuaries Grant, 2012
- *Elizabeth Caroline Crosby Research Award,* University of Michigan, 2012
- *CKER Grant,* Society of Actuaries, March 2005
- *Elizabeth Caroline Crosby Research Award,* University of Michigan, 2002
- *Postdoctoral Research Fellowship*, American Association of University Women, 2001-2002
- *Officer's Grant*, Alfred P. Sloan Foundation, 2001
- *Rackham Fellowship*, Rackham School of Graduate Studies, University of Michigan, 2001

RECOGNITION AND AWARDS

- *Award for Excellence in Concentration Advising*, College of Literature, Science and the Arts, University of Michigan, 2007
- *Class of 1923 Memorial Teaching Award*, College of Literature, Science and the Arts, University of Michigan, 2007
- *Excellence in Education Award,* College of Literature, Science, and the Arts, University of Michigan, December 2003
- *Project NExT Fellow (New Experiences in Teaching)* (1999-2000)
- *Constance Strange Graduate Community Award* (May 1999) University of Connecticut
- *Louis DeLuca Fellowship for Outstanding Teaching* (May 1997) University of Connecticut
- *Award for Outstanding Scholarship in Mathematics* (June 1990) Bucknell University

STUDENTS SUPERVISED

Georgios Vasileiou Dalakouras, Ph.D. 2004
Nitsan Ben-Gal, Undergraduate research project, 2003-2004

DISSERTATION COMMITTEES

Sohhyun Chung, Ph.D. 2013
Huaiying Gu, Ph.D. 2013
Xueying Hu, Ph.D. 2012
Lindsey McCarty, Ph.D. 2012
Ashely Holland, Ph.D. 2012
Ting Wang, Ph.D. 2011
Bo Yang, Ph.D. 2008
Jungmin Choi, Ph.D. 2005
Georgios Dalakouras, Ph.D. 2004 (Chair)
Sara Faridi, Ph.D. 2000
John Robertson, Ph.D. 2000

KRISTEN S. MOORE

Department of Mathematics
University of Michigan
530 Church Street
Ann Arbor, MI 48109-1043

phone: 734 615 6864
fax: 734 763 0937
ksmoore@umich.edu
www.math.lsa.umich.edu/~ksmoore

SELECTED TALKS

1. *Special Session on Mathematics of Insurance*, SIAM Conference on Financial Mathematics and Engineering (July 2006)
2. *Actuarial Research Day*, University of Western Ontario and the Fields Institute (June 2006)
3. *Annual Meeting, Michigan Section of the Mathematical Association of America* (May 2006)
4. *Colloquium*, Albion College (May 2006)
5. *Special Session on Models That Work: Building Diversity in Advanced Mathematics,* Presentation on University of Michigan's ADVANCE Project, Joint Mathematics Meetings (January 2006)
6. *Special Session on Finance and Stochastics*, INFORMS Annual Meeting (November 2005)
7. *Special Session on Mathematics of Actuarial Finance,* Canadian Mathematical Society (June 2005)
8. *Pi Mu Epsilon Induction,* Kenyon College (May 2004)
9. *Conference on Asset Allocation and Mortality,* Individual Finance and Insurance Decisions (IFID) Centre and the Fields Institute for Research in Mathematical Sciences (April 2004)
10. *Actuarial Research Conference,* University of Waterloo (August 2002)
11. *Association for Women in Mathematics Workshop and SIAM Annual Meeting* (July 2002)
12. *Partial Differential Equations Seminar,* University of Minnesota (March 2002)
13. *Midwest Partial Differential Equations Conference* (April 2001)
14. *Pi Mu Epsilon Colloquium,* Western Michigan University (November 2000)
15. *Special Session on History of Mathematics*, AMS Western Region Meeting (October 2000)
16. *Special Session on Topological and Variational Methods in Nonlinear Differential Equations*, International Conference on Dynamical Systems and Differential Equations (May 2000)
17. *Colloquium*, Bucknell University (November 1998)

ACTUARIAL EXPERIENCE

Actuarial Instructor and Advisor
Department of Mathematics, University of Michigan (September 1999 – present)
Department of Mathematics, University of Connecticut (Fall 1997, Fall 1998)

Actuarial Associate
CIGNA Companies, Hartford, CT (August 1990 - August 1994)
Provided actuarial support in CIGNA's Health Care, Individual Financial Services, and Group Pension divisions. Priced innovative managed health care products and group single premium annuities. Analyzed and enhanced division's methodology for reporting gains by product.

Associate of the Society of Actuaries (1992)
Completed the series of examinations that leads to the ASA designation (1992). Passed the Course 5 and Course 6 examinations (2003). Passed the Fundamentals of Actuarial Practice Module 6 (2009).

KRISTEN S. MOORE

Department of Mathematics
University of Michigan
530 Church Street
Ann Arbor, MI 48109-1043

phone: 734 615 6864
fax: 734 763 0937
ksmoore@umich.edu
www.math.lsa.umich.edu/~ksmoore

SERVICE TO THE DEPARTMENT AND UNIVERSITY

- Co-Director, Quantitative Finance Master's Program (Fall 2014 – present)
- Actuarial Master's Admissions, Fellowships, and Advising (Fall 2013 – present)
- Academic Judiciary Committee, College of Literature, Science, and the Arts (Fall 2014 – present)
- Undergraduate Counseling Committee, Mathematics Department (2003-2014)
- Scholarship and Awards Committee (2013 – 2015)
- Executive Committee, Mathematics Department (2002-2003, 2011-2013)
- Curriculum Committee, College of Literature, Science, and the Arts (2007, 2011)
- Development Committee, Mathematics Department (2011-2015)
- ContinuUM Editorial Board (2012 – 2015)
- Mentor, Blavin Scholars Program (2011-2013)
- Preliminary Examination Committee, Applied and Interdisciplinary Mathematics Program, Mathematics Department (2004-2009)
- Co-organizer, Actuarial and Financial Mathematics Seminar, Mathematics Department (2003-2006)
- Host, King/Chavez/Parks (KCP) College Visitation Day, Office of Academic Multicultural Initiatives (2003-2005)
- Junior Women Faculty Network Steering Committee, University of Michigan (2002-2006)
- Faculty Mentor, University of Michigan Mentorship Program, Office of New Student Programs (2002-2003)

SERVICE TO THE MATHEMATICS AND ACTUARIAL COMMUNITIES

- Society of Actuaries Center of Actuarial Excellence Grant Committee (2016)
- Coordinated and moderated panel discussion entitled *University Programs for Academic-Practitioner Collaboration* at Society of Actuaries Annual Meeting (2013)
- Education and Research Section Council, Society of Actuaries (2010-2013)
- Halmstad Prize Committee, Society of Actuaries (2008)
- Organizing Committee, Association for Women in Mathematics workshop held in conjunction with the Society for Industrial and Applied Mathematics annual meeting (2006)
- Committee on the Participation of Women, Mathematical Association of America (2002-2008)
- Session Organizer, *Improving the Persistence of Women in Graduate School*, Joint Mathematics Meetings (January 2003)
- Master Program Committee, Society for Industrial and Applied Mathematicians (2002-2003)
- Committee on the Profession, Mathematical Association of America (2001-2004)
- Judge, Undergraduate Student Poster Session, Mathematical Association of America (2001-2003)
- Referee:
    - North American Actuarial Journal
    - Journal of Pension Economics and Finance
    - Journal of Insurance Issues
    - Journal of Mathematical Analysis and Applications
    - Journal of Computational and Applied Mathematics