

David M. Bradley – Curriculum Vitae

Website: <http://www.math.umaine.edu/~bradley/>

UNIVERSITY OF MAINE
Department of Mathematics & Statistics
5752 Neville Hall
Orono, ME 04469-5752

Phone: (207) 581-3903

E-mail: bradley@math.umaine.edu
dbradley@member.ams.org

Education

Ph.D., Mathematics, University of Illinois at Urbana-Champaign, May 1995

BMath, Pure Mathematics (Honors Co-op), University of Waterloo, May 1990

Professional Experience

July 2009 – Present:

Department Chair
Mathematics & Statistics
University of Maine

March 2007 – Present:

DND Contractor
Top Secret Security Clearance

September 2004 – Present:

Tenured Associate Professor,
University of Maine

August 1998 – August 2004:

Assistant Professor,
University of Maine

July 1997 – July 1998:

Postdoctoral Fellow,
Dalhousie University

July 1995 – July 1997:

NSERC¹ Postdoctoral Fellow,
CECM², Simon Fraser University

January 1986 – May 1987

Modeled economics of petroleum recovery,
Energy, Mines & Resources Canada

¹The Natural Sciences and Engineering Research Council of Canada: <http://www.nserc.ca>

²Centre for Experimental and Constructive Mathematics: <http://www.cecm.sfu.ca>

Refereed Articles

1. Depth reduction of a class of Witten zeta functions, (co-authored with Xia Zhou and Tianxin Cai), *Electronic J. Combinatorics*, **16** (2009), no. 1, #N27.
2. A curious way to test for primes explained, *Mathematics Magazine*, **82** (June 2009), no. 3, 215–218.
3. On shutting up and listening, *MAA FOCUS*, **29** (January 2009), no. 1, 20–21.
4. Hypergeometric functions related to series acceleration formulas, in *Tapas in Experimental Mathematics*, Proceedings of the AMS Special Session on Experimental Mathematics in Action held January 5, 2007 in New Orleans, Louisiana. Tewodros Amdeberhan and Victor Moll eds., Contemporary Mathematics, **457** (2008), 113–125. ISBN: 978-8218-4317-8.
5. Signed q -analogs of Tornheim’s double series, (co-authored with Xia Zhou and Tianxin Cai), *Proceedings of the American Mathematical Society*, **136** (August 2008), no. 8, 2689–2698.
6. Experimental determination of Apéry-like identities for $\zeta(2n + 2)$, (co-authored with David H. Bailey and Jonathan M. Borwein), *Experimental Mathematics*, **15** (2006), no. 3, 281–289.
7. Thirty-two Goldbach variations, (co-authored with Jonathan M. Borwein), *International Journal of Number Theory*, **2** (2006), no. 1, 65–103.
8. A q -analog of Euler’s decomposition formula for the double zeta function, *International Journal of Mathematics and Mathematical Sciences*, **2005** (2005), no. 21, 3453–3458.
9. On the sum formula for multiple q -zeta values, *Rocky Mountain Journal of Mathematics*, **37** (2007), no. 5, 1427–1434.
10. An engaging puzzle to explore algebraic generalizations, (co-authored with Tod Shockey), *Mathematics Teacher*, **99** (April 2006), no. 8, 532–536.
11. Duality for finite multiple harmonic q -series, *Discrete Mathematics*, **300** (2005), 44–56.
12. Parametric Euler sum identities, (co-authored with David and Jonathan Borwein), *Journal of Mathematical Analysis and Applications*, **316** (2006), no. 1, 328–338.
13. The distribution of the irreducibles in an algebraic number field, (co-authored with Ali E. Özlük, Rebecca A. Rozario, and C. Snyder), *Journal of the Australian Mathematical Society*, **79** (2005), no. 3, 369–390.
14. Partition identities for the multiple zeta function, in *Zeta Functions, Topology, and Quantum Physics*, Springer Series: Developments in Mathematics, Vol. 14, T. Aoki, S. Kanemitsu, M. Nakahara, Y. Ohno (eds.) (2005), 19–29. ISBN: 0-387-24972-9.
15. Multiple q -zeta values, *Journal of Algebra*, **283** (2005), no. 2, 752–798.

16. Resolution of some open problems concerning multiple zeta evaluations of arbitrary depth, (co-authored with Douglas Bowman), *Compositio Mathematica*, **139** (2003), no. 1, 85–100.
17. A pair of difference differential equations of Euler-Cauchy type, *Transactions of the American Mathematical Society*, **355** (2003), no. 12, 4985–5002.
18. Representing the mean residual life in terms of the failure rate, (co-authored with Ramesh C. Gupta), *Mathematical and Computer Modelling*, **37** (2003), 1271–1280.
19. Some multi-set inclusions associated with shuffle convolutions and multiple zeta values, (co-authored with Douglas Bowman and Ji Hoon Ryoo), *European Journal of Combinatorics*, **24** (2003), 121–127.
20. Limiting behaviour of the mean residual life, (co-authored with Ramesh C. Gupta), *Annals of the Institute of Statistical Mathematics*, **55** (2003), no. 1, 217–226.
21. A remark on Cavalieri’s quadrature formula, *American Mathematical Monthly*, **110** (2003), no. 5, 437.
22. On a class number formula for real quadratic fields, (co-authored with Ali E. Özlük and C. Snyder), *Bulletin of the Australian Mathematical Society*, **65** (2002), 259–270.
23. Series acceleration formulas for Dirichlet series with periodic coefficients, *The Ramanujan Journal*, **6** (2002), no. 3, 331–346.
24. Some remarks on sinc integrals and their connection with combinatorics, geometry and probability, *Analysis*, **22** (2002), 219–224.
25. The algebra and combinatorics of shuffles and multiple zeta values, (co-authored with Douglas Bowman), *Journal of Combinatorial Theory Series A*, **97** (2002), no. 1, 43–61.
26. On the distribution of the sum of n non-identically distributed uniform random variables, (co-authored with Ramesh C. Gupta), *Annals of the Institute of Statistical Mathematics*, **54** (2002), no. 3, 689–700.
27. Multiple polylogarithms: a brief survey, (co-authored with Douglas Bowman), *Proceedings of a Conference on q -Series with Applications to Combinatorics, Number Theory and Physics*, (Bruce C. Berndt and Ken Ono eds.) American Mathematical Society, Contemporary Mathematics **291** (2001), 71–92.
28. Special values of multiple polylogarithms, (co-authored with Jonathan M. Borwein, David J. Broadhurst, and Petr Lisoněk), *Transactions of the American Mathematical Society*, **353** (2001), no. 3, 907–941.
29. Verhulst’s logistic curve, *The College Mathematics Journal*, **32** (2001), no. 2, 94–98.
30. Using integral transforms to estimate higher order derivatives, *The American Mathematical Monthly*, **107** (2000), no. 10, 932–931.

31. Note on the harmonic series and the n th term test for divergence, *The American Mathematical Monthly*, **107** (2000), no. 7, p. 651.
32. Computational strategies for the Riemann zeta function, (co-authored with Jonathan M. Borwein and Richard E. Crandall), *Journal of Computational and Applied Mathematics*, Special Issue: Numerical Analysis in the 20th Century, Vol. I: Approximation Theory, **121** (2000), 247–296.
33. A class of series acceleration formulae for Catalan’s constant, *The Ramanujan Journal*, **3** (1999), No. 2, 159–173.
34. Combinatorial aspects of multiple zeta values, (co-authored with Jonathan M. Borwein, David J. Broadhurst, and Petr Lisoněk), *The Electronic Journal of Combinatorics*, **5** (1998), no. 1, #R38.
35. Empirically determined Apéry-like formulæ for $\zeta(4n + 3)$, (co-authored with Jonathan M. Borwein), *Experimental Mathematics*, **6** (1997), no. 3, 181–194.
36. A difference differential equation of Euler-Cauchy type, (co-authored with Harold G. Diamond), *Journal of Differential Equations*, **138** (1997), no. 2, 267–300.
37. Evaluations of k -fold Euler/Zagier sums: a compendium of results for arbitrary k , (co-authored with Jonathan M. Borwein and David J. Broadhurst), *The Electronic Journal of Combinatorics*, **4** (1997), no. 2, #R5. Wilf Festschrift.
38. Ramanujan’s formula for the logarithmic derivative of the gamma function, *Mathematical Proceedings of the Cambridge Philosophical Society*, **120** (1996), no. 3, 391–401.
39. Searching symbolically for Apéry-like formulæ for values of the Riemann zeta function, (co-authored with Jonathan M. Borwein), *SIGSAM Bulletin of Algebraic and Symbolic Manipulation*, Association of Computing Machinery, **30** (1996), no. 2, 2–7.
40. A sieve auxiliary function, in *Analytic Number Theory: Proceedings of a Conference in Honor of Heini Halberstam*, Vol. 1 (Bruce C. Berndt et al eds.), Progress in Math. **138**, Birkhäuser (1996), 173–210.
41. On a claim of Ramanujan about certain hypergeometric series, *Proceedings of the American Mathematical Society*, **121** (1994), 1145–1149.

Invited Talks

1. *Multiple Mordell-Tornheim Series and q -Analogues*, Québec-Maine Number Theory Conference, Université Laval, Québec, October 4–5, 2008.
2. *On a Functional Relation for Tornheim’s Double Series, Reducing Higher Depth Mordell-Tornheim Sums, and q -Analogues*, Experimental Mathematics Workshop, Department of Mathematics, Tulane University, New Orleans, Louisiana, March 7–8, 2008.

3. *Hypergeometric Functions that Generate Series Acceleration Formulae for Values of the Riemann Zeta Function*, Special Session on Experimental Mathematics in Action, Joint Meeting of the American Mathematical Society and the Mathematical Association of America, New Orleans, January 5, 2007.
4. *q-Analogs, q-Calculus, q-Series and q-Hypergeometric Functions*, Colloquium, Department of Mathematics, Tulane University, October 12, 2006.
5. *Hypergeometric Functions that Generate Series Acceleration Formulae for Values of the Riemann Zeta Function*, Québec-Maine Number Theory Conference, Université Laval, Québec, Canada, September 30 – October 1, 2006.
6. *Hypergeometric Functions that Generate Series Acceleration Formulae for Values of the Riemann Zeta Function*, International Congress of Mathematicians, Madrid, Spain, August 24, 2006.
7. *An L-function Extension of Ramanujan's Formula for the Riemann Zeta Function with an Entire Parameter*, American Mathematical Society Spring Central Section Meeting, Notre Dame, Indiana, April 8–9, 2006.
8. *On q-Analogs of Multiple Zeta Values and Other Multiple Harmonic Series*, Conference on Additive Number Theory, University of Florida, Gainesville, November 17–20, 2004.
9. *On q-Analogs of Multiple Zeta Values and Other Multiple Harmonic Series*, Québec-Maine Number Theory Conference, Université Laval, Québec, Canada, October 2, 2004.
10. *On q-Analogs of Multiple Zeta Values and Other Multiple Harmonic Series*, Workshop on Analytic and Computational Number Theory, Dalhousie University, Halifax, Nova Scotia, Canada, August 23–27, 2004.
11. *On q-Analogs of Multiple Zeta Values and Other Multiple Harmonic Series*, Colloquium, U.S. Naval Academy, Annapolis, Maryland, August 12, 2004.
12. *Eigenspaces of the Differential Operator $f_s D(f_{s-1} D(\cdots f_1 D) \cdots)$* , Maine/Québec Conference on Number Theory and Related Topics, University of Maine, October 4–5, 2003.
13. *Multiple Polylogarithms and Multiple Zeta Values: Some Results and Conjectures*, keynote address, International Symposium on Zeta functions, Topology and Quantum Physics, Kinki University, Osaka, Japan, March 3–6, 2003.
14. *Lambert's W-Function*, Department of Mathematics and Statistics, University of Maine, Orono, Maine, October 25, 2001.
15. *On Multiple Zeta Functions*, Séminaire de Théorie des Nombres, Université Laval, Québec, Canada, February 6, 2003.
16. *A Pair of Difference Differential Equations*, Québec-Maine Number Theory Conference, Université Laval, Québec, Canada, October 12, 2002.

17. *Shuffles and Multiple Zeta Values*, Number Theory Session, Summer Meeting of the Canadian Mathematical Society, Université Laval, Québec, Canada, June 15–17, 2002.
18. *Multiple Polylogarithms and Multiple Zeta Values—A Survey*, Plenary Lecture, 2002 Illinois Number Theory Conference, University of Illinois at Urbana-Champaign, May 17–18, 2002.
19. *Research Update on Multiple Polylogarithms*, Centre for Experimental and Constructive Mathematics, Simon Fraser University, Burnaby, B.C., Canada, July, 2001.
20. *Multiple Polylogarithms*, Special Session on Number Theory, Joint Meeting of the American Mathematical Society and the Sociedad Matematica Mexicana, Morelia, Michoacán, México, May 23–26, 2001.
21. *Multiple Polylogarithms: A Brief Survey*, University of Calgary, Calgary, Alberta, Canada, February 1, 2001.
22. *Series Evaluations via Identities/Transformation Formulae for Special Functions*, Special Session on Integrals and Series Throughout Mathematics, Joint Mathematics Meetings of the American Mathematical Society, New Orleans, Louisiana, January 10–13, 2001.
23. *New Results and Conjectures for Multiple Polylogarithms*, Conference on q -series with Applications to Combinatorics, Number Theory, and Physics, University of Illinois at Urbana-Champaign, October 26–28, 2000.
24. *Hypergeometric Series and Multiple Polylogarithms*, Algebra and Number Theory Seminar, The Pennsylvania State University, University Park, Pennsylvania, April 6, 2000.
25. *Hypergeometric Functions and Multiple Zeta Values*, Number Theory Seminar, University of Illinois at Urbana-Champaign, January 20, 2000.
26. *Resolution of Some Open Problems Concerning Multiple Zeta Evaluations of Arbitrary Depth*, Conference on Symbolic Computation, Number Theory, Special Functions, Physics and Combinatorics, University of Florida, Gainesville, November 11–13, 1999.
27. *Resolution of Some Open Problems Concerning Multiple Polylogarithm Evaluations of Arbitrary Depth*, second annual Québec-Maine Number Theory Conference, University of Maine, October 11, 1999.
28. *Nested Sums and Iterated Integrals*, Session on the Interaction of Physics, Number Theory and Computer Algebra, IMACS³ conference on Applications of Computer Algebra, El Escorial, Spain, June 26, 1999.
29. *The Algebra, Analysis and Combinatorics of Multiple Polylogarithms*, Special Number Theory/Analysis Seminar, University of Illinois at Urbana-Champaign,

³International Association for Computers in Simulation: <http://www.cs.rutgers.edu/~imacs/>

March 24, 1999.

30. *Nested Series and Iterated Integrals*, Special Session in Elementary and Analytic Number Theory, American Mathematical Society Central Section Meeting, Urbana, Illinois, March 18–21, 1999.
31. *Multiple Zeta Values*, Québec-Maine Number Theory Conference, Université Laval, Québec, Canada, October 10–11, 1998.
32. *Special Values of Multidimensional Polylogarithms*, Algorithms Lab, INRIA⁴ Rocquencourt, France, July 6–10, 1998.
33. *Euler-Cauchy Type Differential Difference Equations*, University of Maine, November 13, 1997.
34. *Multiple Polylogarithms*, University of Maine, November 11, 1997.
35. *New Evaluations of the Zeta Function and its Generalizations*, International Conference on Topics in Number Theory, The Pennsylvania State University, University Park, Pennsylvania, July 1, 1997.
36. *New Formulas and Evaluations for Generalized Hypergeometric/Zeta Functions*, University of Maine, June 13, 1997.
37. *Experimental Mathematics via Inverse Symbolic Computation*, University of Maine, June 12, 1997.
38. *Evaluating Multidimensional Polylogarithmic Sums*, Dalhousie University, Halifax, Nova Scotia, June 3, 1997.
39. *Apéry-Like Formulae for $\zeta(4n+3)$* , Workshop on Experimental Mathematics and Combinatorics, CRM⁵, Université de Montréal, May, 1997.
40. *Strange Hypergeometric Series Evaluations, Zeta Function Formulae, and Computer Assisted Discovery*, Kent State University, March 7, 1997.
41. *Euler Sums: Some Results and Conjectures*, Simon Fraser University, Burnaby, British Columbia, March 1997.
42. *Apéry-like Formulae for $\zeta(4n+3)$* , Fifth Conference of the Canadian Number Theory Association, Carleton University, Ottawa, Ontario, Canada, August 1996.
43. *A Sieve Auxiliary Function*, International Conference on Analytic Number Theory held in honor of Heini Halberstam, Robert Allerton Park Conference Center, Monticello, Illinois, May 17, 1995.
44. *Ramanujan's Formula for the Logarithmic Derivative of the Gamma Function*, UIUC Chapter of the Sigma Xi Scientific Research Society, April 20, 1995.
45. *Some Representations of a Sieve Auxiliary Function*, Western Number Theory Conference, University of California, San Diego, December 1994.

⁴Institut National de Recherche en Informatique et en Automatique: <http://www.inria.fr>

⁵Centre de Recherches Mathématiques: <http://www.crm.umontreal.ca/>

46. *Ramanujan's Formula for the Logarithmic Derivative of the Gamma Function*, Fourth Conference of the Canadian Number Theory Association, Dalhousie University, Halifax, Nova Scotia, Canada, July 3, 1994.
47. *On the Analytic Continuation of the Riemann Zeta Function*, Illinois Number Theory Conference, University of Illinois at Urbana-Champaign, April 8, 1994.
48. *On a Claim of Ramanujan About Certain Hypergeometric Series*, UIUC Chapter of the Sigma Xi Scientific Research Society, April, 1993.

Grants

1. \$1900 awarded by the American Mathematical Society to present a paper at the International Congress of Mathematicians held August 2006 in Madrid, Spain. Travel grants were awarded on a competitive basis. Approximately one in six applications were funded, with a higher priority assigned to applicants within two years of receiving the Ph.D.
2. \$1500 distance education grant to develop an internet-based online version of Calculus I, January 2006.
3. \$1500 distance education grant to develop an internet-based online version of Calculus II, January 2005.
4. \$7500 awarded by the University of Maine Faculty Research Funds Committee for the proposal, "*Relations Satisfied by Multiple Polylogarithms*," February 2003.
5. \$1000 travel grant awarded by the American Mathematical Society to attend the "Mathematical Challenges of the 21st Century" conference at UCLA, August 7–12, 2000.
6. \$800 travel grant awarded by the Vice Provost for Research to present a paper at the International Association for Computers in Simulation Conference on Applications of Computer Algebra, El Escorial, Spain, June 26, 1999.
7. \$5000 awarded by the UMaine Summer Faculty Research Fund for the proposal, "*A New Technique for Analyzing Certain Difference Differential Equations*," January 1999.
8. May 1991–May 1995: Quarter-time research support, University of Illinois Campus Research Board.
9. \$6000 NSERC summer research grant, University of Waterloo, 1988 and 1989.
10. \$3000 NSERC industrial research grant held at WATCOM Systems Inc., a software development firm formerly affiliated with the University of Waterloo, 1987.

Other Honors

1. Departmental award for outstanding achievement in research, 2006–2007.
2. The editors of the NCTM⁶ publication, *Mathematics Teacher*, selected the article “An engaging puzzle to explore algebraic generalizations,” (co-authored with Tod Shockey) as one of four featured in a starter kit for new teachers and prospective NCTM members. The article was selected from approximately 45 entries for both its intellectual reach and its pedagogical usefulness.
3. Elected full member of Sigma Xi: The Scientific Research Society, July 1996.
4. Elected to the Phi Kappa Phi Honor Society, April 1995.
5. Awarded \$100 by the UIUC Chapter of the Sigma Xi Scientific Research Society in their 1995 research competition for the publication “Ramanujan’s formula for the logarithmic derivative of the gamma function,” *Math. Proc. Cambridge Phil. Soc.*, **120** (1996), no. 3, 391–401.
6. Awarded \$100 by the UIUC Chapter of the Sigma Xi Scientific Research Society in their 1993 research competition for the publication “On a claim of Ramanujan about certain hypergeometric series,” *Proc. Amer. Math. Soc.*, **121** (1994), 1145–1149.

Reviews solicited by the American Mathematical Society

1. Featured Review (co-authored with Jonathan M. Borwein) of “Ramanujan’s theories of elliptic functions to alternative bases,” by Bruce C. Berndt, S. Bhargava, and Frank Garvan, *Transactions of the American Mathematical Society*, **347** (1995), no. 11, 4163–4244. [MR 1311903] (#97h:33034)
2. Review of “Differential inequalities for Iwaniec’s q -functions,” by Harold G. Diamond and Heini Halberstam, in *Number Theory in Progress*, **2** (Zakopane-Kóscielisko, 1997), 721–735, de Gruyter, Berlin, 1999. [MR 1687540] (#2000f:11123)
3. Review of “New representations for the Madelung constant,” by Richard Crandall, *Experimental Mathematics*, **8** (1999), no. 4, 367–379. [MR 1737232] (#2000m:11125)
4. Review of “On Russell-type modular equations,” by Heng Huat Chan and Wen-Chin Liaw, *Canadian J. Math.*, **52** (2000), no. 1, 31–46. [MR 1745700] (#2001c:33028)
5. Review of “Cubic modular equations and new Ramanujan-type series for $1/\pi$,” by Heng Huat Chan and Wen-Chin Liaw, *Pacific J. Math.*, **192** (2000), no. 2, 219–238. [MR 1744566] (#2001e:11041)

⁶National Council of Teachers of Mathematics: <http://www.nctm.org>

6. Review of “Problems from uniform asymptotic analysis of integrals in particular in connection with Tricomi’s Ψ -function,” by Nico M. Temme, in *Tricomi’s ideas and contemporary applied mathematics*, (Rome/Turin 1997), pp. 183–201, *Atti Convegni Lincei* **147** Accad. Naz. Lincei, Rome, 1998. [MR 1737496] (#2001i:33004)
7. Review of “Some definite integrals associated with the Riemann zeta function,” by H. M. Srivastava, M. L. Glasser, and V. S. Adamchik, *Z. Anal. Anwendungen*, **19** (2000), no. 3, 831–846. [MR 1784133] (#2001g:11136)
8. Review of “New formulas for approximation of π and other transcendental numbers,” by Bahman Kalantari, *Numerical Algorithms*, **24** (2000), no. 1-2, 59–81. [MR 1784992] (#2001h:11087)
9. Review of “On Barnes’ multiple zeta and gamma functions,” by S. N. M. Ruijsenaars, *Adv. Math.*, **156** (2000), no. 1, 107–132. [MR 1800255] (#2002b:33022)
10. Review of “Congruences relating rational values of Bernoulli and Euler polynomials,” by Glenn J. Fox, *Fibonacci Quarterly*, **39** (2001), no. 1, 50–57. [MR 1812619] (#2002a:11014)
11. Review of “Parallel integer relation detection: techniques and applications,” by David H. Bailey and David J. Broadhurst, *Math. Comp.*, **70** (2001), no. 236, 1719–1736 (electronic). [MR 1836930] (#2002b:11174)
12. Review of “Analytic continuation of multiple zeta-functions and their values at non-positive integers,” by Shigeki Akiyama, Shigeki Egami and Yoshio Tanigawa, *Acta Arith.*, **98** (2001), no. 2, 107–116. [MR 1831604] (#2002c:11113)
13. Review of “Extended Bell and Stirling numbers from hypergeometric exponentiation,” by J.-M. Sixdeniers, K. A. Penson and A. I. Solomon, *J. Integer Seq.*, **4** (2001), no. 1, Article 01.1.4, 11 pp. (electronic). [MR 1848944] (#2002e:11022)
14. Review of “On some new continued fractions related to ${}_2\varphi_1$ basic hypergeometric functions,” by K. R. Vasuki and K. Shivashankara, *Far East J. Math. Sci.*, **3** (2001), no. 3, 435–443. [MR 1835870] (#2002f:33024)
15. Review of “Evaluation of Euler-Zagier sums,” by Khristo Boyadzhiev, *Int. J. Math. Math. Sci.* **27** (2001), no. 7, 407–412. [MR 1874187] (#2002k:11147)
16. Review of “Computing the Riemann zeta function by numerical quadrature,” by William F. Galway, in *Dynamical, spectral, and arithmetic zeta functions* (San Antonio, Texas, 1999), 81–91, *Contemp. Math.*, **290**, Amer. Math. Soc., Providence, RI, 2001. [MR 1868470] (#2002i:11131)
17. Review of “Generating power series of coloured polylogarithm functions and Drinfel’d associator,” by M. Bigotte, G. Jacob, N. E. Oussous, and M. Petitot. *Computer Mathematics* (Chiang Mai, 2000), 39–48, Lecture Notes Ser. Comput., **8**, World Sci. Publishing, River Edge, NJ, 2000. [MR 1896308] (#2003e:11071)
18. Review of “Consecutive evaluation of Euler sums,” by Khristo N. Boyadzhiev, *Int. J. Math. Math. Sci.*, **29** (2002), no. 9, 555–561. [MR 1900347] (#2003d:11124)

19. Review of “A quantum field theoretical representation of Euler-Zagier sums,” by Uwe Müller and Christian Schubert, *Int. J. Math. Math. Sci.*, **31** (2002), no. 3, 127–148. [MR 1914732] (#2003b:11096)
20. Review of “Fast computation of $\zeta(3)$ and of some special integrals using the Ramanujan formula and polylogarithms,” by Ekatherina A. Karatsuba, *BIT*, **41** (2001), no. 4, 722–730. [MR 1881214] (#2003E:11142)
21. Review of “Some infinite series related to Feynman diagrams,” by Odd Magne OGREID and Per Osland, *J. Comput. Appl. Math.*, **140** (2002), 659–671. [MR 1934465] (#2003G:11145)
22. Review of “On some combinatorial relations for Tornheim’s double series,” by Hirofumi Tsumura, *Acta Arithmetica*, **105** (2002), 239–252. [MR 1931792] (#2003i:11134)
23. Review of “Ramanujan’s elliptic functions to alternative bases and approximations to π ,” by Heng Huat Chan, in *Number theory for the millennium, I* (Urbana, IL, 2000), 197–213, A K Peters, Natick, MA, 2002. [MR 1956226] (#2003k:11194)
24. Review of “Relations of multiple zeta values and their algebraic expression,” by Michael E. Hoffman and Yasuo Ohno, *J. Algebra*, **262** (2003), 332–347. [MR 1971042] (#2004c:11163)
25. Review of “Note on multiple zeta-values,” by Henryk Żoładek, *Buletinul Academiei de Ştiinţe a Republicii Moldova Matematica*, **41** (2003), no. 1, 78–82. [MR 1992652] (#2004c:11168)
26. Review of “On alternating analogues of Tornheim’s double series,” by Hirofumi Tsumura, *Proc. Amer. Math. Soc.* **131** (2003), no. 12, 3633–3641. [MR 1998168] (#2004e:11102)
27. Review of “A generalization of the Bernoulli polynomials,” by Pierpaolo Natalini and Angela Bernardini, *J. Appl. Math.* (2003), no. 3, 155–163. [MR 1982355] (#2004g:33023)
28. Review of “Inductive construction of rapidly convergent series representations for $\zeta(2n + 1)$,” by Hari M. Srivastava and Hirofumi Tsumura, *Internat. J. Comput. Math.*, **80** (2003), no. 9, 1161–1173. [MR 2008431] (#2004i:11099)
29. Review of “On Euler-Barnes multiple zeta functions,” by Taekyun Kim, *Russ. J. Math. Phys.*, **10** (2003), no. 3, 261–267. [MR 2012900] (#2004j:11106)
30. Review of “Combinatorial relations for Euler-Zagier sums,” by Hirofumi Tsumura, *Acta Arith.*, **111** (2004), no. 1, 27–42. [MR 2038060] (#2005a:11140)
31. Review of “Formal computations about multiple zeta values,” by Marc Espie, Jean-Christophe Novelli, and Georges Racinet, From combinatorics to dynamical systems, 1–16, *IRMA Lect. Math. Theor. Phys.*, **3**, de Gruyter, Berlin, 2003. [MR 2049420] (#2005d:11134)
32. Review of “Evaluation formulas for Tornheim’s type of alternating double series,”

- by Hirofumi Tsumura, *Math. Comp.*, **73** (2003), no. 245, 251–258. [MR 2034120] (#2005d:11137)
33. Review of “Finite polyzêtas, poly-Bernoulli numbers, identities of polyzêtas and noncommutative rational power series,” by Hoang Ngoc Minh, in *Proc. WORDS’03, TUCS Gen. Publ.*, **27** (2003), 232–250, Turku Cent. Comput. Sci., Turku. [MR 2081357] (#2005g:11169)
 34. Review of “The Hopf algebra structure of multiple harmonic sums,” by Michael E. Hoffman, *Nuclear Phys. B Proc. Suppl.* **135** (2004), 215–219. [MR 2111842] (#2005i:11125)
 35. Review of “Shuffle algebra and differential Galois group of colored polylogarithms,” by Hoang Ngoc Minh, *Nuclear Phys. B Proc. Suppl.* **135** (2004), 220–224. [MR 2111843] (#2005k:11135)
 36. Review of “Sum relations for multiple zeta values and connection formulas for the Gauss hypergeometric function,” by Yasuo Ohno and Takashi Aoki, *Publ. Res. Inst. Math. Sci.*, Kyoto Univ., **41** (2005), no. 2, 329–337. [MR 2138027] (#2005m:11165)
 37. Review of “Duality formulas of the special values of multiple polylogarithms,” by Jun-ichi Okuda, *Bull. London Math. Soc.*, **37** (2005), no. 2, 230–242. [MR 2119023] (#2006a:11084)
 38. Review of “Evaluations of a class of double L -values,” by David Terhune, *Proc. Amer. Math. Soc.*, **134** (2006), no. 7, 1881–1889. [MR 2214115] (#2006k:11178)
 39. Review of “On certain combination of colored multizeta values,” by Matilde N. Lalín, *J. Ramanujan Math. Soc.*, **21** (2006), no. 1, 115–127. [MR 2226356] (#2007d:11104)
 40. Review of “Derivation and double shuffle relations for multiple zeta values,” by Kentaro Ihara, Masanobu Kaneko, and Don Zagier, *Compositio Mathematica*, **142** (2006), no. 2, 307–338. [MR 2218898] (#2007e:11110)
 41. Review of “Primality from factorization properties of Cheybshev polynomials,” by Mohamed O. Rayes and Vilmar Trevisan, *JP Journal of Algebra, Number Theory and Applications*, **6** (2006), no. 3, 503–514. [MR 2284513] (#2007j:33018)
 42. Review of “On some functional relations between Mordell-Tornheim double L -functions and Dirichlet L -functions,” by Hirofumi Tsumura, *J. Number Theory*, **120** (2006), no. 1, 161–178. [MR 2256802] (2007j:11122) (#2007j:11122)
 43. Review of “New relations among Euler sums of even weight,” by Wen-Chin Liaw, *Tamkang J. Math.*, **38** (2007), no. 1, 21–36. [MR 2321029] (2008g:11138)
 44. Review of “The dilogarithm function,” by Don Zagier, *Frontiers in Number Theory, Physics, and Geometry II*, Springer, Berlin, 2007, 3–65. [MR 2290758] (2008h:33005)
 45. Review of “On relations for the multiple q -zeta values, by Jun-ichi Okuda and

- Yoshihiro Takeyama, *Ramanujan J.*, **14** (2007), no. 3, 379–387. [MR 2357443] (2008j:11011)
46. Review of “Symmetry on linear relations for multiple zeta values,” by Kentaro Ihara and Hiroyuki Ochiai, *Nagoya Math. J.*, **189** (2008), 49–62. [MR 2396583]
47. Review of “Analytic and combinatoric aspects of Hurwitz polyzetas,” by Jean-Yves Enjalbert and Hoang Ngoc Minh, *J. Théor. Nombres Bordeaux*, **19** (2007), no. 3, 595–640. [MR 2388791]
48. Review of “Renormalization of multiple zeta values,” by Li Guo and Bin Zhang, *J. Algebra*, **319** (2008), no. 9, 3770–3809. [MR 2407850]

Refereed Problems and Solutions

1. Problem 11188: “A Terminating Hypergeometric Series,” (with David H. Bailey and Jonathan M. Borwein), *The American Mathematical Monthly*, Vol. 112, No. 10, December 2005, p. 929.
2. Solution to 10486: “A Zeta Function over a Recurrent Sequence,” *The American Mathematical Monthly*, Vol. 106, No. 7, August-September, 1999, pp. 686–688.
3. Solution to 10582: “Möbius and Riemann,” *The American Mathematical Monthly*, Vol. 106, No. 2, February 1999, p. 170.
4. Solution to 10605: “An Infinite Product,” *The American Mathematical Monthly*, Vol. 106, No. 2, February 1999, pp. 173–174.
5. Solution to 10563: “Asymptotics of a Laplace Transform,” *The American Mathematical Monthly*, Vol. 105, No. 3, March 1998, pp. 280–281.
6. Problem 10642: “Tail Conditions and Exponential Decay,” *The American Mathematical Monthly*, Vol. 105, No. 2, February 1998, p. 175.
7. Solution to 96-16: “A Combinatorial Expression from Oceanography,” *SIAM Review*, Vol. 39, No. 4, December 1997, pp. 772–774.
8. Problem 10589 (with Paul Bateman): “The Easier Waring’s Problem with Distinct Summands,” *The American Mathematical Monthly*, Vol. 104, No. 5, May 1997, p. 456. (Solution appeared as 10596: “Binary Expansions and k th Powers,” Vol. 106, No. 4, April 1999, pp. 366–367.)
9. Problem Q860: “A Bilateral Hyperbolic Cosine Sum,” *Mathematics Magazine*, Vol. 70, No. 1, February 1997, p. 66.
10. Problem 10485: “Another Equation with a Golden Solution,” *The American Mathematical Monthly*, Vol. 102, No. 9, November 1995, p. 841. (Solution appeared in the August-September 1998 issue, p. 675.)

Advising

(i) GRADUATE STUDENTS (M.A. THESES)⁷

- Katherine Merrill, Master of Arts in Mathematics, May 2005.
- Ji Hoon Ryoo, Master of Arts in Mathematics, May 2001.
- Paulo Correia, Master of Arts in Mathematics, May 2001.

(ii) UNDERGRADUATE STUDENTS

- Current advisees: Julie Corriveau, Sarah Frost, James Roet, Isaac Michaud, Jessica Warren
- Apoorva Khare (apoorva@math.uchicago.edu), Formerly at the Institute of Physics, Sachivalaya Marg, Bhubaneswar, India; now a graduate student at The University of Chicago.

Assisted Mr. Khare in bringing his paper, “Divisibility Tests,” into a form suitable for publication. The paper appears in the *Furman University Electronic Journal of Undergraduate Mathematics*, Vol. 3, 1997, pp. 1–5.

(iii) THESIS COMMITTEES

- Christian Wilson, Master of Arts in Mathematics, University of Maine, Spring 2009.
- Jacob Simmons, Doctor of Philosophy in Physics, University of Maine, Spring 2007.
- Zachary Smith, Master of Arts in Mathematics, University of Maine, Spring 2007.
- Thomas Enkosky, Master of Arts in Mathematics, University of Maine, Spring 2004.
- Bingxia Wang, Master of Arts in Statistics, University of Maine, Spring 2002.
- Nicholas Bogan, Master of Arts in Mathematics, University of Maine, Fall 2000.
- Nicole Brown, Master of Arts in Statistics, University of Maine, Fall 2000.
- External Examiner for Anthony Sofó’s Doctoral Thesis, “Summing Series Using Residues,” Department of Computer and Mathematical Sciences, Victoria University of Technology, Melbourne, Australia, March 1999.

Thesis advisor: Peter Cerone

⁷There is no mathematics Ph.D. program in Maine.

Teaching Record

University of Maine

GRADUATE COURSES

Course Number & Title	Semester	Text (Author)
MAT 523 - Real Variables I	Fall 2008	Pfeffer
MAT 528 - Complex Variables II	Spring 2008	Remmert
MAT 527 - Complex Variables I	Fall 2007	"
MAT 524 - Real Variables II	Spring 2007	Bartle
MAT 523 - Real Variables I	Fall 2006	"
MAT 528 - Complex Variables II	Spring 2006	Rubel & Luecking
SMT 505 - Math Education Research	Fall 2005	course notes
MAT 527 - Complex Variables I	Fall 2005	Lang
MAT 524 - Real Variables II	Spring 2005	Rana
MAT 523 - Real Variables I	Fall 2004	"
MAT 500 - Special Functions	Fall 2004	course notes
MAT 527 - Complex Variables I	Fall 2003	Remmert
MAT 578 - Topology II	Spring 2003	Munkres
MAT 528 - Complex Variables II	Spring 2002	Lang
MAT 527 - Complex Variables I	Fall 2001	"
MAT 524 - Real Variables II	Spring 2001	Folland
MAT 523 - Real Variables I	Fall 2000	"
MAT 528 - Complex Variables II	Spring 2000	Conway
MAT 527 - Complex Variables I	Fall 1999	"
MAT 524 - Real Variables II	Spring 1999	Royden
MAT 523 - Real Variables I	Fall 1998	"

UPPER LEVEL UNDERGRADUATE COURSES

Course Number & Title	Semester	Text
MAT 481 - Discrete Math	Fall 2008	I. Niven
MAT 401 - Senior Capstone	Fall 2008	course notes
MAT 463 - Abstract Algebra I	Fall 2003	C. Hadlock
MAT 481 - Discrete Math	Fall 2002	Concrete Math
MAT 465 - Number Theory	Spring 2002	Hardy & Wright
MAT 452 - Complex Analysis	Spring 2001	H. A. Priestley
MAT 425 - Real Analysis I	Spring 2000	W. Rudin

SOPHOMORE LEVEL COURSES

Course Number & Title	Semester	Text
MAT 259 - Differential Equations	Spring 2009	Edwards
MAT 258 - Differential Equations & Linear Algebra	Spring 2009	course notes
MAT 262 - Linear Algebra	Spring 2005	Penney
MAT 259 - Differential Equations	Spring 2005	Edwards
MAT 259 - Differential Equations	Fall 2004	"
MAT 258 - Differential Equations & Linear Algebra	Spring 2004	course notes
MAT 228 - Vector Calculus	Spring 2004	Stewart
MAT 228 - Vector Calculus	Spring 2003	"
MAT 228 - Vector Calculus	Fall 2002	"

SERVICE COURSES

Course	Semester	Text
MAT 126 - Online Calculus I	Summer 2009	Rogawaski
MAT 127 - Online Calculus II	"	"
MAT 126 - Online Calculus I	Spring 2009	"
Academ-e Calculus I	"	"
MAT 127 - Online Calculus II	"	"
Academ-e Calculus II	"	"
MAT 126 - Online Calculus I	Fall 2008	"
Academ-e Calculus I	"	"
MAT 127 - Online Calculus II	"	"
Academ-e Calculus II	"	"
MAT 126 - Online Calculus I	Summer 2008	"
MAT 127 - Online Calculus II	"	"
Academ-e Calculus II	Spring 2008	"
MAT 126 - Online Calculus I	"	"
MAT 127 - Online Calculus II	"	"

Note: Academ-e Calculus is offered through UMaine's early college distance education program designed to offer qualified high school seniors university-level courses using state-of-the-art teaching and learning technologies combined with on-campus experiences.

SERVICE COURSES CONTINUED

Course	Semester	Text
MAT 126 - Live Calculus I	Fall 2007	"
Academ-e Calculus I	"	"
MAT 126 - Online Calculus I	"	"
MAT 127 - Online Calculus II	"	"
MAT 126 - Online Calculus I	Summer 2007	"
MAT 127 - Online Calculus II	"	"
Academ-e Calculus II	Spring 2007	Smith & Minton
MAT 126 - Online Calculus I	"	"
MAT 127 - Online Calculus II	"	"
Academ-e Calculus I	Fall 2006	"
MAT 126 - Online Calculus I	"	"
MAT 127 - Online Calculus II	"	"
MAT 126 - Online Calculus I	Summer 2006	Smith & Minton
MAT 126 - Online Calculus I	Spring 2006	"
MAT 127 - Online Calculus II	"	"
MAT 127 - Online Calculus II	Fall 2005	Anton
MAT 127 - Integral Calculus	Summer 2005	Smith & Minton
MAT 111 - College Algebra	Fall 2004	Blitzer
MAT 111 - College Algebra	Summer 2004	"
MAT 127 - Integral Calculus	Spring 2004	"
MAT 127 - Integral Calculus	Fall 2003	"
MAT 127 - Integral Calculus	Summer 2003	"
MAT 127 - Integral Calculus	Summer 2002	"
MAT 126 - Differential Calculus	Fall 2001	"
MAT 111 - College Algebra	Fall 2000	Larson
MAT 126 - Differential Calculus	Fall 1999	Stewart
MAT 127 - Integral Calculus	Spring 1999	"
MAT 126 - Differential Calculus	Fall 1998	"

Dalhousie University

- Math 2030 - Matrix Theory and Linear Algebra I, Summer 1998
- Math 1010 - Differential and Integral Calculus II, Spring 1998
- Math 1000 - Differential and Integral Calculus I, Fall 1997

Simon Fraser University

- Math 343 - Discrete Mathematical Modeling, Fall 1995 and Fall 1996

University of Illinois at Urbana-Champaign

- Calculus for Economists, Fall 1994
- Calculus for Engineers II, Fall 1993
- Calculus for Engineers II, Fall 1992

- Calculus for Engineers I, Fall 1991
- Linear Algebra, Summer 1991
- Trigonometry, Fall 1990

Departmental Service

(i) COMMITTEES

1. Fall 2007 – Summer 2008: Pure Mathematics Tenure-Track Search
2. Fall 2005 – Present: Ph.D. Intent to Plan
3. Fall 2004 – July 2009: Peer Committee
4. Fall 2004 – Spring 2005: Applied Mathematics Tenure-Track Search
5. Fall 2001 – Spring 2002: Mathematics Education Tenure-Track Search
6. Fall 2000 – Fall 2002: Technology Committee
7. Fall 2000 – Fall 2001: Undergraduate Curriculum Committee
8. Fall 2000 – Fall 2001: Travel Funds Committee
9. Spring 1999 – Fall 2000: Computer Modeling Institute Steering Committee
10. Fall 1999 – Spring 2000: Computational Mathematics Tenure-Track Search

(ii) OTHER DEPARTMENTAL ACTIVITIES

- June 2004 – March 2009: Graduate Coordinator
- Fall 2004 – Present: Department Library Liason
- Fall 2004 – Fall 2007: Graduate Board Representative
- Fall 1999 – Spring 2003: Seminar and Colloquium Coordinator
- Spring 2000: Co-authored handbook for the graduate program.
- May 2000: Oversaw the re-organization of the department library.

Service to the University

- College of Liberal Arts and Sciences Faculty Awards Committee, June 2002 – June 2006.
- Senior faculty mentor assigned by the Center for Teaching Excellence, 2004 – present. Mentees:
 - Daniel Bilodeau, Assistant Professor of Theatre, 2008 – 2009
 - Charlsye Diaz, Assistant Professor of English, 2005 – 2008
 - Ali Ebedi, Assistant Professor of Electrical Engineering, 2004 – 2005
 - Tod Shockey, Assistant Professor of Mathematics Education, 2004 – 2006

Service to the Profession

- Grant proposal evaluator for NSF, NSA, NSERC and the Austrian Science Fund (FWF)

- Textbook reviewer for John Wiley & Sons, McGraw-Hill, W. H. Freeman
- Research monograph reviewer for Springer-Verlag
- Referee for numerous scholarly journals and conference proceedings including but not limited to *Compositio Mathematica*, *Crelle*, *Trans. Amer. Math. Soc.*, *Proc. Amer. Math. Soc.*, *Advances in Math.*, *Acta Arithmetica*, *Pacific J. Math.*, *J. London Math. Soc.*, *Canadian J. Math.*, *J. Number Theory*, *Internat. J. Number Theory*, *J. Ramanujan Math. Soc.*, *Ramanujan J.*, *Proc. Amer. Math. Soc.*, *Z. Anal. Anwendungen*, *Math. Comp.*, *Internat. J. Math. Sci.*
- Article reviewer for AMS *Math Reviews*
- Assisted with organizing and hosting the following conferences:
 - International Conference on Statistics in the 21st Century, University of Maine, June 29 – July 1, 2000.
 - Second annual Québec-Maine Number Theory Conference, University of Maine, October 7–10, 1999.
 - International Conference on Analytic Number Theory in honor of Heini Halberstam, Robert Allerton Park Conference Center, Monticello, Illinois, May 1995.
- May 2002 – Fall 2007: Officer of the UMaine chapter of the Sigma Xi Scientific Research Society.
- Fall 1997: Coached the Dalhousie University Putnam team.
- March 1997: Represented Simon Fraser University’s Centre for Experimental and Constructive Mathematics at the British Columbia Advanced Systems Institute Exchange.
- August 1996 – August 1997: Secretary-Treasurer of the University of British Columbia chapter of the Sigma Xi Scientific Research Society.

Professional Memberships

- American Mathematical Society
- Canadian Mathematical Society
- Mathematical Association of America
- Sigma Xi Scientific Research Society
- American Association for the Advancement of Science
- University of Illinois Alumni Association - life member
- University of Waterloo Alumni Association