

Bruce M. Landman - Curriculum Vitae

Department of Mathematics
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Education

Ph.D. Mathematics, Virginia Tech, 1983

M.A. Mathematics, State University of New York at Binghamton, 1975

B.A. Mathematics, Queens College of the City University of New York, 1973

Employment

Professor and Chair, Department of Mathematics, University of West Georgia, 2001-present

Professor of Mathematics, University of North Carolina at Greensboro, 2000-01

Associate Professor of Mathematics, University of North Carolina at Greensboro, 1992-2000

Assistant Professor of Mathematics, University of North Carolina at Greensboro, 1988-92

Assistant Professor of Mathematics, Hofstra University, 1984-88

Visiting Assistant Professor of Mathematics, Virginia Tech, 1983-84

Instructor of Mathematics, Virginia Tech, 1978-83

Research Articles

1. J.W. Layman and B. Landman, Note on the local growth of iterated polynomials, *Aequationes Math.* **27** (1984), 150-156.
2. B. Landman, Generalized van der Waerden numbers, *Graphs and Combinatorics* **2** (1986), 351-356.
3. B. Landman and R.N. Greenwell, Values and bounds for Ramsey numbers associated with polynomial iteration, *Discrete Math.* **68** (1988), 77-83.
4. R.N. Greenwell and B. Landman, On the existence of a reasonable upper bound for the van der Waerden numbers, *J. Comb. Theory (A)* **50** (1989), 82-86.
5. B. Landman and R.N. Greenwell, Some new values and bounds for van der Waerden-like numbers, *Graphs and Combinatorics* **6** (1990), 287-291.
6. B. Landman, F. Portier, T.P. Vaughan, Concavity properties of numbers of solutions of Diophantine equations, *J. Comb. Math. Comb. Comp.* **8** (1990), 39-49.
7. B. Landman and R.N. Greenwell, Accurate bounds for new van der Waerden type numbers, *J. Comb. Math. Comb. Comp.* **8** (1990), 103-106.

8. B. Landman and R.N. Greenwell, Multiplicative partitions of bipartite numbers, *Fibonacci Quart.* **29** (1991), 264-267.
9. T.P. Vaughan, B. Landman, F. Portier, Concavity properties of numbers satisfying the binomial recurrence, *J. Comb. Math. Comb. Comp.* **12** (1992), 23-32.
10. B. Landman, E.A. Brown, F. Portier, Partitions of bipartite numbers into at most j parts, *Graphs and Combinatorics* **8** (1992), 65-73.
11. B. Landman, Ramsey functions related to the van der Waerden numbers, *Discrete Math.* **102** (1992), 265-278.
12. B. Landman, An upper bound for van der Waerden-like numbers using k colors, *Graphs and Combinatorics* **9** (1993), 177-184.
13. B. Landman, Ramsey functions associated with second-order recurrences, *J. Comb. Math. Comb. Comp.* **15** (1994), 119-128.
14. B. Landman and A.F. Long, Ramsey functions for sequences with adjacent differences in a specified congruence class, *Congressus Numer.* **103** (1994), 3-20.
15. T.C. Brown and B. Landman, The Ramsey property for collections of sequences not containing all arithmetic progressions, *Graphs and Combinatorics* **12** (1996), 149-161.
16. T.C. Brown, B. Landman, M. Mishna, Monochromatic homothetic copies of $\{1, 1 + s, 1 + s + t\}$, *Canadian Math. Bull.* **40** (1997), 149-157.
17. B. Landman and B. Wysocka, Collections of sequences having the Ramsey property only for few colors, *Bull. Australian Math. Soc.* **55** (1997), 19-28.
18. B. Landman, Avoiding arithmetic progressions (mod m) and arithmetic progressions, *Utilitas Math.* **52** (1997), 173-182.
19. B. Landman, Ramsey functions for quasi-progressions, *Graphs and Combinatorics* **14** (1998), 131-142.
20. B. Landman, Monochromatic sequences whose gaps belong to $\{d, 2d, \dots, md\}$, *Bull. Australian Math. Soc.* **58** (1998), 93-101.
21. B. Landman, On avoiding arithmetic progressions whose common differences belong to a given small set, *J. Comb. Math. Comb. Comp.* **30** (1999), 221-229.
22. T.C. Brown, R.L. Graham, B. Landman, On the set of common differences in van der Waerden's theorem on arithmetic progressions, *Canadian Math. Bull.* **42** (1999), 25-36.
23. T.C. Brown and B. Landman, Monochromatic arithmetic progressions with large differences, *Bull. Australian Math. Soc.* **60** (1999), 21-35.

24. B. Landman, On some generalizations of the van der Waerden number $w(3)$, *Discrete Math.* **207** (1999), 137-147.
25. J.K. Kim and B. Landman, On the number of multiplicative partitions of a multi-partite number, *J. Comb. Math. Comb. Comp.*, **37** (2001), 159-171.
26. B. Landman and A. Robertson, Generalized van der Waerden triples, *Discrete Math.*, **256** (2002), 279-290.
27. B. Landman, A. Robertson, and C. Culver, Some new exact van der Waerden numbers, *Integers: Electronic J. Comb. Number Theory*, **5** (2) (2005).
28. N. Frantzikinakis, B. Landman, and A. Robertson, On the degree of regularity of generalized van der Waerden triples, *Advances Applied Math.*, **37** (2006), 124-128.
29. A. Khodkar and B. Landman Recent progress in Ramsey theory on the integers, *Integers: Elec. J. Comb. Number Theory*, accepted.
30. B. Landman, and A. Robertson, Avoiding monochromatic sequences with special gaps, *SIAM J. Discrete Math.*, accepted subject to revision.

Selected Talks

1. National Meeting of the American Mathematical Society, Louisville, Kentucky, 1984.
2. James Madison University, colloquium speaker, 1984.
3. Mary Washington College, colloquium speaker, 1984.
4. Southeastern Sectional Meeting of the American Mathematical Society, Charlotte, North Carolina, 1986.
5. National Meeting of the American Mathematical Society, San Antonio, Texas, 1987.
6. Georgia State University, colloquium speaker, 1987.
7. National Meeting of the American Mathematical Society, Atlanta, Georgia, 1988.
8. University of North Carolina at Charlotte, colloquium speaker, 1988.
9. Southeastern Regional Meeting on Numbers (SERMON), Greensboro, North Carolina, 1989.
10. National Meeting of the American Mathematical Society, Louisville, Kentucky, 1990.
11. Mathematical Association of America Southeastern Regional Meeting, Davidson, North Carolina, 1990.

12. Virginia Wesleyan College, colloquium speaker, 1991.
13. Twenty-Third Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Boca Raton, Florida, 1992.
14. Student Chapter of the Mathematical Association of American, Greensboro, North Carolina, colloquium speaker, 1993.
15. Twenty-Fifth Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Boca Raton, Florida, 1994.
16. Special Session (Ramsey Theory) of the American Mathematical Society Annual Summer Meeting, Burlington, Vermont, 1995.
17. Southeastern Regional Meeting on Numbers (SERMON), Winston-Salem, North Carolina, 1996.
18. First North Carolina Mini-Conference on Combinatorics and Graph Theory, Greensboro, North Carolina, 1996.
19. Tenth Annual Cumberland Conference, Atlanta, Georgia, 1997.
20. Second North Carolina Mini-Conference on Combinatorics and Graph Theory, Greensboro, North Carolina, 1997.
21. Southeastern Regional Meeting on Numbers (SERMON), Greensboro, North Carolina, 1998.
22. Eleventh Annual Cumberland Conference, Johnson City, Tennessee, 1998.
23. Special Session (Combinatorics and Graph Theory) of the American Mathematical Society Southeastern Sectional Meeting, Winston-Salem, North Carolina, 1998.
24. Guilford College, Greensboro, North Carolina, colloquium speaker, 1998.
25. Third North Carolina Mini-Conference on Combinatorics and Graph Theory, Greensboro, North Carolina, 1999.
26. Eastern Kentucky University, Richmond, Kentucky, colloquium speaker, 2000.
27. Fourth North Carolina Mini-Conference on Combinatorics and Graph Theory, Greensboro, North Carolina, 2000.
28. Illinois State University, Normal, Illinois, colloquium speaker, 2001.
29. East Carolina University, Greenville, North Carolina, colloquium speaker, 2001.
30. Seventeenth Clemson Mini-conference on Combinatorial Optimization, 2002.

31. Sixteenth Annual Cumberland Conference, Atlanta, Georgia, 2003.
32. Integers Conference 2003, Carrollton, Georgia, 2003.
33. Integers Conference 2005, Carrollton, Georgia, 2005.

Books

1. *Ramsey Theory on the Integers* (with A. Robertson), American Mathematical Society, Providence, Rhode Island, 2004.
2. *Topics in Combinatorial Number Theory*, Editor (with M. Nathanson, J. Nešetřil, C. Pomerance), DIMATIA, Prague, 2005.
3. *Combinatorial Number Theory: In Celebration of the 70th Birthday of Ron Graham*, Editor (with M. Nathanson, J. Nešetřil, R. Nowakowski, C. Pomerance), de Gruyter, Berlin, in press.

Grants and Other Scholarly Accomplishments and Awards

- Research cited in over twenty articles and books.
- “Quadratic Polynomial Iteration,” Problem 1203, *Mathematics Magazine* **57**, 298 (1984); **58**, 301-302 (1985) (with B. Klein and J.W. Layman).
- Research Council of the University of North Carolina at Greensboro, Summer Excellence Research Award, \$4000, 1989 and 1991.
- Merit Awards for Research, College of Arts and Sciences, 1992, 1998, 1999.
- Equipment Grant (with F. Sadri, J. Wang, S. Lea, K. Sivalingam), University of North Carolina at Greensboro, 1996, \$12,000.
- Contributor to article “Reductions and convergence rates of average time” by J. Berliner and J. Wang, in *Lecture Notes in Computer Science*, Springer-Verlag, Berlin, 1996.
- Awarded paid research leave, Fall Semester, 1997, University of North Carolina at Greensboro.
- Contributor to *Calculus, Sixth Edition* and *Calculus, Seventh Edition* by Howard Anton, Wiley, 1999 and 2001.
- Winner, Graduate Faculty Research Award, University of West Georgia, 2003.
- NSF Conferences in the Mathematical Sciences Grant “Integers 2005,” (PI), \$6000.
- Number Theory Foundation Conference Support Grant, “Integers 2005,” \$1500.

- NSF REU Grant, “Problems in Combinatorics and Graph Theory,” (PI), \$283,180, pending.
- NSF Conferences in the Mathematical Sciences Grant “Integers 2007,” (PI), \$17,208, pending.

Administrative and Leadership Experience

- Chair, Department of Mathematics, University of West Georgia, 2001-present. Duties include
- Managing Editor and Founding Editor of International Research Journal *INTEGERS*, 1998-present.
- Director of Undergraduate Studies, 1995-2001.
- Honors Council Member, 1997-2000.
- Chair, University Student Excellence Award Committee, 1999-2000.
- University System of Georgia Academic Advisory Committee on Mathematical Subjects, 2001-present.
- Executive Committee of the College of Arts and Sciences, 2002-04, 2006-.
- Budget and Planning Committee, College of Arts and Sciences, 2000-01.
- Chair, Personnel Committee, Department of Mathematical Sciences, 1992-93, 1994-95, 1997-98.

Leadership Workshops

- American Council on Education workshop “Chairing the Academic Department,” San Antonio, Texas, November 7-10, 2001.
- Mathematical Association of America PREP workshop “Leading the Academic Department,” Reston, Virginia, June 19-22, 2003.

Courses Taught

Undergraduate Courses:

- Algebra and Trigonometry
- Pre-calculus
- Elementary Statistics (freshman level)

- Finite Mathematics (freshman level)
- Mathematics as a Liberal Art
- Elementary Set Theory, Logic, and Probability (freshman level)
- Business Calculus
- Calculus I,II,III,IV
- Honors Calculus
- Sophomore Seminar
- Introduction to Proofs and Mathematical Structures (junior level)
- Discrete Mathematics I (sophomore level)
- Discrete Mathematics II (junior level)
- Matrix Theory (junior level)
- Linear Algebra with Applications (junior level)
- Elementary Differential Equations (junior level)
- Applied Finite Mathematics (junior level)
- Advanced Calculus (junior level)
- Modern Algebra (junior level)
- Theory of Numbers (senior level)
- Set Theory (senior level)
- Theory of Groups (senior level)
- Combinatorial Analysis (senior level)
- Introductory Graph Theory (senior level)
- Number Theory II (senior level)

Graduate Courses:

- Applied Combinatorics
- Graph Theory
- Number Theory

- Abstract Algebra
- Set Theory
- Combinatorial Number Theory

Graduate Thesis Direction

- External Examiner, Ph.D. Thesis: V. Jungic, 1998-99, and H. Ardal, 2007-08, Department of Mathematics and Statistics, Simon Fraser University, British Columbia, Canada
- Master's Thesis Advisor: Kathryn Benjamin, Hofstra University, 1988-89; Mark Pierce, UNC-Greensboro, 1999.
- Member, Master's Thesis Committee: S. Chen, UNC-Greensboro, 1989; K. Griffin, UNC-Greensboro, 1992; F.D. Gaddis, UNC-Greensboro, 1995; B. Jobe, UNC-Greensboro, 1995; T. Howell, UNC-Greensboro, 1998; S.W. Adkins, UNC-Greensboro, 1999.

Undergraduate Research Supervision

- Undergraduate Honors Thesis Advisor, A.F. Inman, UNC-Greensboro, 1992-93.
- Advisor for all Honors students in the Department of Mathematical Sciences, 1997-2000.
- Mentor for several students in the North Carolina Teaching Fellows program, 2000-01.
- Undergraduate Research Supervisor for Clay Culver, 2003-04, and Lucas McMichem, 2004-05, University of West Georgia

Other Instructional and Curricular Activities

- Taught four 1-week workshops for area high school teachers in Calculus I and Calculus II for UNC-Greensboro program whereby high school students earn college credit (1997-98).
- Developed graduate courses in Combinatorics and Graph Theory at UNC-Greensboro.
- Developed courses in Combinatorics, Graph Theory, and Number Theory II, at the University of West Georgia.
- Largely responsible for the Applied Mathematics Track for the M.A. degree at UNC-Greensboro; co-author of the multi-track system for this degree, in effect since 1997.
- Author of numerous Master's comprehensive exams in the areas of Combinatorics, Number Theory, Graph Theory, and Algebra (1990-present).

- Co-developed Masters program, University of West Georgia
- Co-developed tracks for B.S. degree in Applied Discrete Mathematics and Applied Computational Mathematics at UWG.
- Co-developed multi-track system for pre-calculus sequence, UNC-Greensboro.
- Developed Business Calculus course, Hofstra University.

Conference Organizing

- Organizer and Host of Integers Conference 2003 and of Integers Conference 2005 in Combinatorial Number Theory, October 31-November 2, 2003, and October 27-30, 2005
- Organizer of Regional Conferences in Combinatorics and Graph Theory, Greensboro, North Carolina, each of the years 1996, 1997, 1999, 2000.
- Organizer of the Special Session in Combinatorics and Graph Theory for the American Mathematical Society Southeastern Regional Meeting, Winston-Salem, North Carolina, October 9-10, 1998.
- Organizer of the Special Session in Ramsey Theory for the American Mathematical Society Annual Summer Meeting, Burlington, Vermont, August 7-8, 1995.
- Co-organizer of the Southeastern Regional Meeting on Numbers, Greensboro, North Carolina, each of the years 1989, 1990, 1991.

Other Professional Service

- Grant reviewer for National Science Foundation, 2006-present.
- Grant reviewer for National Science and Engineering Research Council of Canada, 2003-present.
- University of West Georgia Representative to the Association of American Colleges and Universities, 2003-present.
- Reviewer for *Mathematical Reviews*; have reviewed approximately fifty articles, 1995-present.
- Referee for the following journals: *Ars Combinatoria*, *Discrete Mathematics*, *J. Combinatorial Theory (A)*, *Graphs and Combinatorics*, *American Mathematical Monthly*, *Advances in Applied Mathematics*, *European Journal of Combinatorics*, *Canadian Mathematical Bulletin*, *Fibonacci Quarterly*, *Electronic Journal of Combinatorics*, *Radovi Matematiki*, *Integers: Electronic Journal of Combinatorial Number Theory*, *Proceedings of the Midwest Conference on Combinatorics, Cryptography, and Computing*.

- Reader for the Advanced Placement Mathematics Exam of the Educational Testing Service, Clemson, South Carolina, 1991.
- Member of the following organizations: *Institute of Combinatorics and Its Applications* (Fellow), *The American Mathematical Society*, *The Mathematical Association of America*, *The Fibonacci Association*.

Other System, University, and Department Service

- Member, University Committee on Hiring Policies for Non-Citizens, 2006-.
- Member, University Graduation and Retention Task Force, 2005-present
- Member, Georgia System Educator Preparation Academic Advisory Committee, 2005-present
- Member, President's University Marketing Task Force, 2005-06
- Member, College of Arts and Sciences Faculty Leave Committee, 2003-04
- Chair, Search Committee for Crider Endowed Chair in Mathematics, 2002-03.
- Chair, Department Library Committee, 2000-01.
- Department Honors Liaison, 1997-2001.
- Chair, University Student Excellence Award Committee, 1999-2000.
- Chair, Department Committee on the Calculus Sequence, 1999-2000
- Member, Department Library Committee, 1995-2000
- Assessment Liaison to the College, 1996-2000.
- Chair, Search Committee for Applied Mathematics Position, 1998-99.
- Technology Liaison to the College, 1997-99.
- Member, University Student Excellence Awards Committee, 1998-99
- Member, Department Committee on Technology in the Classroom, 1998-99.
- Member, Department Committee on the Calculus Sequence, 1998-99.
- Member, University Honors Curriculum Committee, 1997-98.
- Member, University Honors Council Tutorials Committee, 1997-98.
- Chair, Department Assessment Committee, 1996-98.

- Member, College Promotion and Tenure Committee, 1996-98.
- Member, (ad hoc) Committee to Review the Personnel Committee, 1996-97.
- Member, Department Personnel Committee, 1990-92; 1993-94, 1996-97.
- Chair, Search Committee for Temporary Position in Mathematics, 1994-95.
- Member, Search Committee for Temporary Mathematics Position, 1993-94.
- Member, Department Undergraduate Studies Committee, 1993-95.
- Member, Department Graduate Committee, 1993-95.
- Member, Search Committee for tenure-track Computer Science position, 1992-93.
- Member, Department Scholarship Committee, 1988-90, 1991-93.
- Member, Department (ad hoc) Committee on the Ph.D.
- Member, Department telephone campaign to recruit high school seniors, 1992-93.
- Administered Mathematics Placement Examination, 1990-91.
- Advisor for Pi Mu Epsilon, 1990-91.