

# Bruce M. Landman

## Curriculum Vitae

Department of Mathematics  
University of West Georgia  
Carrollton, Georgia 30118  
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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

## 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, 2007.
4. *Combinatorial Number Theory: Proceedings of Integers Conference 2007*, Editor (with M. Nathanson, J. Nešetřil, R. Nowakowski, C. Pomerance), de Gruyter, Berlin, in press.

## 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. C. Culver, B. Landman, and A. Robertson, 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, in *Combinatorial Number Theory*, de Gruyter, Berlin, 2007, 305-313.
30. B. Landman, and A. Robertson, Avoiding monochromatic sequences with special gaps, *SIAM J. Discrete Math.* **21** (2007), 794-801.
31. T.C. Brown, B. Landman, and A. Robertson, Bounds on van der Waerden numbers and some related functions, *J. Combinatorial Number Theory (Series A)*, to appear.

32. B. Landman and K. Ventullo, Avoiding monochromatic sequences with gaps in a fixed translation of the primes, *Utilitas Math.*, to appear.
33. H. Ardal, D. Gunderson, V. Jungić, B. Landman, K. Williamson, Ramsey results involving the Fibonacci numbers, *Fibonacci Quart.*, to appear.

## Selected Presentations

1. James Madison University, Invited colloquium speaker, 1984.
2. Mary Washington College, Invited colloquium speaker, 1984.
3. Southeastern Sectional Meeting of the American Mathematical Society, Charlotte, North Carolina, 1986. Abstract in *Abstracts of Papers Presented to the American Mathematical Society* **7**, 1986.
4. National Meeting of the American Mathematical Society, San Antonio, Texas, 1987. Abstract in *Abstracts of Papers Presented to the American Mathematical Society* **8**, 1987.
5. Georgia State University, Invited colloquium speaker, 1987.
6. National Meeting of the American Mathematical Society, Atlanta, Georgia, 1988. Abstract in *Abstracts of Papers Presented to the American Mathematical Society* **9**, 1988.
7. University of North Carolina at Charlotte, Invited colloquium speaker, 1988.
8. Southeastern Regional Meeting on Numbers, University of North Carolina at Greensboro, 1989.
9. National Meeting of the American Mathematical Society, Louisville, Kentucky, 1990. Abstracts (two) in *Abstracts of Papers Presented to the American Mathematical Society* **11**, 1990.
10. Mathematical Association of America Southeastern Regional Meeting, Davidson, North Carolina, 1990.
11. Virginia Wesleyan College, Invited colloquium speaker, 1991.
12. Twenty Third Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Boca Raton, Florida, 1992.
13. Student Chapter of the Mathematical Association of American, Greensboro, North Carolina, Invited speaker, 1993.
14. Twenty Fifth Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Boca Raton, Florida, 1994.

15. Special Session (Ramsey Theory) of the American Mathematical Society Annual Summer Meeting, Burlington, Vermont, 1995. Abstract in *Abstracts of Papers Presented to the American Mathematical Society* **16**.
16. Southeastern Regional Meeting on Numbers, Winston-Salem, North Carolina, 1996.
17. First North Carolina Mini-Conference on Combinatorics and Graph Theory, Greensboro, North Carolina, 1996.
18. Tenth Annual Cumberland Conference, Atlanta, Georgia, 1997.
19. Second North Carolina Mini-Conference on Combinatorics and Graph Theory, Greensboro, North Carolina, 1997.
20. Southeastern Regional Meeting on Numbers, Greensboro, North Carolina, 1998.
21. Eleventh Annual Cumberland Conference, Johnson City, Tennessee, 1998.
22. Special Session (Combinatorics and Graph Theory) of the American Mathematical Society Meeting, Winston-Salem, North Carolina, 1998. Abstract in *Abstracts of Papers Presented to the American Mathematical Society* **19**.
23. Guilford College, Greensboro, North Carolina, Invited colloquium speaker, 1998.
24. Third North Carolina Mini-Conference on Combinatorics and Graph Theory, Greensboro, North Carolina, 1999.
25. Eastern Kentucky University, Richmond, Kentucky, Invited colloquium speaker, 2000.
26. Fourth North Carolina Mini-Conference on Combinatorics and Graph Theory, Greensboro, North Carolina, 2000.
27. Illinois State University, Normal, Illinois, Invited colloquium speaker, 2001.
28. East Carolina University, Greenville, North Carolina, Invited colloquium speaker, 2001.
29. Seventeenth Clemson Mini-conference on Combinatorial Optimization, 2002.
30. Sixteenth Annual Cumberland Conference, Atlanta, Georgia, 2003.
31. Integers Conference 2003, Carrollton, Georgia, 2003.
32. Integers Conference 2005, Carrollton, Georgia, 2005.
33. Meeting on Ethics in the Mathematical Sciences, Invited Colloquium speaker, East Tennessee State University, Johnson City, Tennessee, 2007.

## Funded Grants

- Research Council of the University of North Carolina at Greensboro, Summer Excellence Research Award, 1989, \$4000.
- Research Council of the University of North Carolina at Greensboro, Summer Excellence Research Award, 1991, \$4000.
- Equipment Grant (with F. Sadri, J. Wang, S. Lea, K. Sivalingam), University of North Carolina at Greensboro, 1996, \$12,000.
- University System of Georgia Eminent Scholar Matching Fund, awarded to Department of Mathematics (Co-writer), 2002, \$500,000.
- National Science Foundation Conferences in the Mathematical Sciences Grant “Integers 2005,” (PI), 2005, \$6000.
- Number Theory Foundation Conference Support Grant, “Integers 2005,” 2005, \$1500.
- National Science Foundation Conferences in the Mathematical Sciences Grant “Integers 2007,” (PI), 2007, \$17,208.
- National Science Foundation Research Experiences for Undergraduates (REU) Grant, “Problems in Combinatorics and Graph Theory,” (PI), 2007-2010, \$216,422.
- National Science Foundation Conferences in the Mathematical Sciences Grant “Integers 2009,” (PI), 2009, \$17,900.

## Other Scholarly Awards and Accomplishments

- “Quadratic Polynomial Iteration,” Problem 1203, *Mathematics Magazine* **57**, 298 (1984); **58**, 301-302 (1985) (with B. Klein and J.W. Layman).
- Merit Awards for Research, College of Arts and Sciences, University of North Carolina at Greensboro, 1992, 1998, 1999.
- 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.
- Graduate Faculty Research Award (one of only two awarded within College of Arts and Sciences), University of West Georgia, 2003.
- Winner, Centennial Faculty Award 2007 for the Sciences, University of West Georgia.
- Awarded research sabbatical, Fall Semester, 2008, University of West Georgia.
- Research has been cited in over thirty articles and books.

## Administrative and Leadership Experience

- Chair, Department of Mathematics, University of West Georgia, 2001-present. Duties include responsibility for all Department personnel, budgetary, and instructional matters, and for providing leadership in curriculum and research programs.
- Managing Editor and Founder of the International Research Journal *INTEGERS*, 1998-present. Duties include: coordinating the refereeing of articles; conducting all correspondence with authors and referees; leading the Editorial Board and staff in policy-making and governance of the journal; being the public spokesperson for the journal; ensuring all articles are processed in a timely fashion; managing subscriptions; overseeing all budgetary and technical matters.
- Director of Undergraduate Studies, Department of Mathematics, University of North Carolina at Greensboro, 1995-2001.
- Budget and Planning Committee, College of Arts and Sciences, 2000-01.
- Executive Committee of the College of Arts and Sciences, 2002-04, 2006-08.

## 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.
- National Academies Workshop, “Partnerships for Emerging Research Institutions,” Washington, D.C., September 13, 2007.

## Courses Taught

Undergraduate Courses:

- Algebra and Trigonometry
- Pre-calculus
- Elementary Statistics
- 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

- Master's Thesis Advisor, Kathryn Benjamin, Hofstra University, 1988-89
- External Examiner, Ph.D. Thesis: V. Jungic, 1998-99, Department of Mathematics, Simon Fraser University
- External Examiner, Masters Thesis: Karen Johannson, 2006-07, Department of Mathematics, University of Manitoba
- External Examiner, Ph.D. Thesis: H. Ardal, 2008-09, Department of Mathematics, Simon Fraser University
- Member, Master's Thesis Committees: 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 and Mentoring

- 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
- Co-authored refereed research papers with the following undergraduate students: Clay Culver, Kevin Ventullo, Kevin Williamson

## 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.
- Co-developed Applied Mathematics Track for the M.A. degree at UNC-Greensboro.
- Co-developed tracks for B.S. degree in Applied Discrete Mathematics and Applied Computational Mathematics at UWG.
- 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.

## Conference Organizing

- Co-organizer of the Southeastern Regional Meeting on Numbers, Greensboro, North Carolina, each of the years 1989, 1990, 1991.
- Organizer of the Special Session in Ramsey Theory for the American Mathematical Society Annual Summer Meeting, Burlington, Vermont, August 7-8, 1995.
- 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 and Host of the 2003, 2005, 2007, and 2009 Integers Conferences in Combinatorial Number Theory; October 31-November 2, 2003; October 27-30, 2005; October 24-27, 2007; October 14-17, 2009.

## Other Professional Service

- Grant reviewer for National Science Foundation, 2006-present.
- Grant reviewer for National Science and Engineering Research Council of Canada, 2003-present.
- Reviewed book proposals for Prentice-Hall Publishing and Wiley Publishing, 2007-08.
- 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*, *Journal of the Elisha Mitchell Scientific Society*.
- 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*.

## **Additional System, University, and Department Service**

- Member, Business Calculus Committee, 1985-86
- Member, Department Personnel Committee, 1986-88
- Department Representative and Lecturer, “College for a Day,” 1987
- Member, Department Scholarship Committee, 1988-90, 1991-93
- Advisor for Pi Mu Epsilon, 1990-91
- Administered Mathematics Placement Examination, 1990-91
- Member, Department Personnel Committee, 1990-92; 1993-94, 1996-97
- Member, Search Committee for tenure-track Computer Science position, 1992-93
- Member, Department (ad hoc) Committee on the Ph.D., 1992-93
- Member, Department telephone campaign to recruit high school seniors, 1992-93
- Member, Search Committee for Temporary Mathematics Position, 1993-94
- Member, Department Undergraduate Studies Committee, 1993-95
- Member, Department Graduate Committee, 1993-95
- Chair, Search Committee for Temporary Position in Mathematics, 1994-95
- Member, Department Library Committee, 1995-2000
- Member, (ad hoc) Committee to Review the Personnel Committee, 1996-97
- Chair, Department Assessment Committee, 1996-98
- Member, College Promotion and Tenure Committee, 1996-98
- Assessment Liaison to the College, 1996-2000
- Member, University Honors Curriculum Committee, 1997-98
- Member, University Honors Council Tutorials Committee, 1997-98
- Technology Liaison to the College, 1997-99
- University Honors Council Member, 1997-2000
- Department Honors Liaison, 1997-2001
- Chair, Search Committee for Applied Mathematics Position, 1998-99

- 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
- Chair, University Student Excellence Award Committee, 1999-2000
- Chair, Department Committee on the Calculus Sequence, 1999-2000
- Chair, Department Library Committee, 2000-01
- Member, University System of Georgia Academic Advisory Committee on Mathematical Subjects, 2001-present
- Chair, Search Committee for Crider Distinguished Chair in Mathematics, 2002-03
- Member, College of Arts and Sciences Faculty Leave Committee, 2003-04
- Member, Various College ad hoc committees appointed by Dean, 2004-present
- Member, President's University Marketing Task Force, 2005-06
- Member, University Graduation and Retention Task Force, 2005-present
- Member, Georgia System Educator Preparation Academic Advisory Committee, 2005-present
- Member, University Committee on Hiring Policies for Non-Citizens, 2006-08
- Member, Senate Ad Hoc Rules Committee, 2007-08
- Member, Review Committee on the College of Arts and Sciences, 2007-08