

**Vita**  
**(as of Fall, 2023)**  
**Dr. David G. Robinson**

**Academic Achievement**

- Ph.D. (1989), Emory University, Atlanta, GA  
Advisor: Dwight Duffus  
Area: Algebra/Combinatorics
- B.A. (1980), The Colorado College, Colo. Spgs, CO  
Major: Mathematics

**Positions**

- Assistant Professor, Lecturer and Sr. Lecturer of Mathematics:
  - U. of West Georgia, Carrollton, GA, 2004-present
  - Agnes Scott College, Decatur, GA, 1996-99, 2002-04
  - Kennesaw State U., Kennesaw, GA, 2000-01
  - Truett-McConnell College, Cleveland, GA, 1999-2000
  - Guilford College, Greensboro, NC, 1991-96
  - Clemson University, Clemson, SC, 1989-91
- Actuarial Assistant - 2 years:
  - Stanley, Holcombe & Associates, Atlanta, GA, 2001-02
  - Aetna Life & Casualty, Hartford, CT, 1982-83
- Teaching Assistant in Mathematics:
  - Emory University, Atlanta, GA, 1983-89
  - The Colorado College, Colo. Spgs., CO, 1980-82

**Courses Taught**

Pre-calculus, calculus, differential equations, statistics, discrete/finite/quantitative skills math, history/philosophy of math, linear algebra, number theory, abstract algebra (undergraduate and graduate levels), combinatorics (under grad and grad), graph theory, geometry, real analysis, complex analysis, and coding theory (graduate level)

**Computer Skills**

MS Word, MS DOS, MS EXCEL, Geometer's Sketchpad, MATLAB, MAPLE, BASIC and FORTRAN languages, TI graphics calculators

**Research Interests**

Algebra/Combinatorics: block designs, finite Geometries, error-correcting codes, lattices, tournaments. [Current projects: "Magic Venn Diagrams", "Fair Tournaments", "Leech forests", "Tournament polynomials".]

Number Theory: partitions, generating functions, finite fields, Diophantine equations, continued fractions, sums of divisors. [Current projects: "Magic Venn diagrams", "Goldbach sequences", "Biperfect numbers", "Digitally Perfect Numbers", "Tournament polynomials".]

## **Publications & Presentations**

- “An Arc Length Identity for Limaçons, Ellipses and Cycloids”, 12 pages, accepted for publication in Math Magazine, 2023; two identities from this paper were added by Marichev Oleg to the list of elliptic integral identities and transformations on the *Wolfram Special Functions* website ([wolfram.com/functions/ellipticintegrals](http://wolfram.com/functions/ellipticintegrals)).
- “Magic Venn Diagrams”, two versions (long version 54 pages, short version, 21 pages); co-authored with Anja Remshagen (UWG), 2021 – 2023. Submitted, but not yet accepted for publication.
- “Paradoxes of Infinity”, 13-page paper (unpublished), presented to UWG Math majors 2022, and (earlier version) at UWG *Math Day Colloquium Talk for Teachers* March 30, 2007
- “Every  $(2, r)$ -regular graph is regular”, with Abdollah Khodkar and David Leach (University of West Georgia), *Utilitas Mathematica* (2007).
- “Gaussian Polynomials”, presented at University of West Georgia, Discrete Math Seminar, December, 2005.
- “Integrals of Periodic Functions”, with Sean Ellermeyer (Kennesaw St. U.), *Mathematics Magazine* 74 (Dec., 2001).
- “Smoothness versus skewness in block designs with an application to tournaments”, *Journal of Combinatorial Designs* 3 (1995), pp. 299-305.
- “Tournament square roots”, with Ray Fletcher (Virginia St. University), *Congressus Numerantium* 106 (1995), pp. 7-25.
- “Short course on statistics”, presented in four two-hour sessions at Precision Fabrics Group, High Point, NC, January, 1995.
- “A survey of design theory and coding theory”, presented at U. of North Carolina at Greensboro, combinatorics/number theory seminar, fall, 1992.
- “Bipartitions and products of Young lattices”, presented at meeting of the American Math. Society, Tuscaloosa, AL, March of 1992.
- “The number of fixed points of a random order-preserving chain map”, presented at SIAM Conference on Discrete Math., Atlanta, GA, June, 1990.
- “On Heron Triangles”, *American Mathematical Monthly*, (May, 1990)
- “A polynomial identity”, solution to problem #E3207, *American Mathematical Monthly* 97 (1990), pp.60-70.
- Symmetric Chain Decompositions of the Lattice of Subspaces of a Finite Vector Space (Doctoral dissertation, Emory U. Library, Atlanta, GA, 1989.)

### **Other Academic Activities**

- Served as advisor and co-chair for PhD dissertation in Psychology, by Ram Vivekananda, “The function of Imagination in Mathematical Reasoning: An Exploratory Study”, UWG, 2016 – 2017.
- Directed and/or taught several seminars and numerous independent study projects in number theory, combinatorics, history of mathematics, and complex analysis, U. of West Georgia, Guilford College and Agnes Scott College 1991-present.
- Refereed various number theory papers, UWG (2005 – present), Clemson U.(1990).
- Chaired session on “the teaching of Statistics” at Southeastern Sectional Meeting of the Math. Assn. of America, Atlanta, GA, March, 1997.
- Directed Senior Honors Thesis (“On Steiner triple systems, perfect codes, and Steiner quasigroups”) by William Estes, Guilford College, Greensboro, NC, 1995-96.
- Organized and directed faculty seminar on “Probability and its impact on science and society”, Guilford C., Greensboro, NC, 1994.
- Served on Ph.D. thesis committee for Sekhar Mudanna of Clemson U. (Computer Science Dept., David Jacobs), 1992-93.
- Directed Master’s Thesis (“Directed friendship graphs”) by Daniel Pillone of Clemson U., Clemson, 1991.

### **References**

- C. David Leach, Prof. Of Math., University of West Georgia, Carrollton, GA, 30118, (678) 839-4127, [cleach@westga.edu]
- Sean Ellermeyer, Prof. Of Math., Kennesaw St. Univ., 1000 Chastain Rd. NW, Kennesaw, GA, 30144, (770) 423-6129 [sellerme@Kennesaw.edu]
- Raymond Fletcher, Asst. Professor of Math., Virginia St. U., Petersburg, VA, 23806, (804) 524-6878 [rfletcher@vsu.edu]