

# Curriculum Vitae — Wayne M. Dymàček

## Address

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Department of Mathematics  
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## Biography

**Born:** June 25, 1952 in Richmond, Virginia  
**Married:** Diana Ruth Dymacek on December 21, 1973  
**Children:** Ivy Ida (1975) and Julian Marshall (1979)

## Education

Ph.D., Virginia Tech, 1978.      Thesis: Steinhaus Graphs and Tournaments  
B.S. in Mathematics (with distinction), Virginia Tech, 1974

## Professional Experience

### Primary

2001–present: Head of the Mathematics Department, Washington and Lee University  
1993–present: Professor of Mathematics, Washington and Lee University  
1988–1993: Associate Professor of Mathematics, Washington and Lee University  
1981–1987: Assistant Professor of Mathematics, Washington and Lee University  
1978–1981: Cryptanalytic mathematician, National Security Agency

### Secondary

1979–present: Reviewer for Mathematical Reviews  
1983–89, 1991–94, 1996, 1997: Recipient of Washington and Lee's Glenn Grant  
1991–1998: Table Leader for the Advanced Placement Calculus Exams  
1986–1990: Reader for the Advanced Placement Calculus Exams  
Refereed articles for *Australasian Journal of Combinatorics*, *Discrete Applied Mathematics*, *Discrete Mathematics*, *Journal of Graph Theory*, *Taiwanese Journal of Mathematics*

## Member

American Mathematical Society  
Association of Christians in the Mathematical Sciences  
Institute of Combinatorics and Its Applications  
Mathematical Association of America  
Pi Mu Epsilon  
T<sub>E</sub>X User Group  
American Chestnut Foundation

**Mathematical Interests:** Combinatorics, graph theory, history of mathematics

## Service

### Mathematical

Mathematical Association of America's "Committee on Testing", 1997–1999

### Student Related

Chapter Advisor for the Mathematical Association of America Student Chapter  
Initiator of the chapter of the honorary mathematics society, Pi Mu Epsilon  
Chapter Director for Virginia Theta Chapter of Pi Mu Epsilon  
Coordinated the Virginia Tech and Putnam mathematics contests  
Conducted courses for actuarial students  
Directed numerous student research projects, both academic-year and summer  
Advisor for the Campus Libertarians

**Service****Departmental**

- Interim chairman, Spring 1999
- Library committee (1981–present)
- Colloquium committee (1994–present)
- Created a graph theory course

**University**

- Advance Placement committee, 1992–2000
- Registration and class schedules committee, 1988–1992

**Invited Addresses**

1. “Connectivity in Steinhaus Graphs,” George Washington University, April 15, 1988.
2. “Women in Mathematics,” Hampden-Sydney College, January 31, 1990.
3. “What is Discrete Mathematics?” Blue Ridge Council of Teachers of Mathematics, February 24, 1992.
4. “Coloring Steinhaus graphs,” United States Naval Academy, January 27, 1993.
5. “Thoughts on Mental Calculation,” Virginia Wesleyan College, April 13, 1993.
6. “Survey of Steinhaus Graphs,” Eight Quadrennial International Conference on Graph Theory at Western Michigan University, June 3–6, 1996.
7. “Disconnected Complements of Steinhaus Graphs,” Ninth Quadrennial International Conference on Graph Theory, Combinatorics, Algorithms, and Applications, June 4–9, 2000, Western Michigan University, Kalamazoo, Michigan.

**Publications**

**Book:** (with Henry Sharp, Jr.) *Introduction to Discrete Mathematics*, McGraw-Hill, 1998.

**Articles**

1. (with D. P. Roselle) Circular Permutations by Number of Rises and Successions, *J. Combin. Theory Ser. A*, **25** (1978), no. 2, 196–201. (MR 81i:05008).
2. Steinhaus graphs, *Congressus Numerantium*, **XXIII** (1979), 399–412. (MR 81f:05120).
3. (with D. P. Roselle) Cyclic Designs and Uniformly Deep Families, *J. Combin. Theory Ser. A*, **28** (1980), no. 2, 130–139. (MR 81f:05043).
4. Complements of Steinhaus graphs, *Discrete Math.* **37** (1981), no. 2-3, 167–180. (MR 84d:05151).
5. Bipartite Steinhaus graphs, *Discrete Math.* **59** (1986), no. 1-2, 9–20. (MR 88e:05095).
6. Steinhaus tournaments, *Congressus Numerantium*, **53** (1986), 221–233. (MR 88c:05060)
7. (with Craig Bailey) Regular Steinhaus graphs, *Congressus Numerantium*, **66** (1988), 45–47. (MR 90a:05132).
8. Small cycles in Steinhaus graphs, *Congressus Numerantium*, **70** (1990), 41–52. (MR 91b:05115)
9. (with Tom Whaley) Steinhaus graphs as a source of bit-wise projects, *Journal of Computing in Small Colleges*, March 1992.
10. (with Tom Whaley) Generating strings for bipartite Steinhaus graphs, *Discrete Mathematics*, **141** (1995), no. 1-3, 95–107. (MR 96c:05085).
11. (with Matthew Koerlin and Tom Whaley) A survey of Steinhaus graphs, Proceedings of the Eighth Quadrennial International Conference on Graph Theory, Combinatorics, Algorithms and Applications, pages 313–323, Vol. 1, 1998.
12. (with Anurag Chandra, Noah Egorin, and Tom Whaley) Parallel Searches for hereditary node properties in binary trees, Proceedings of the 36th annual ACM Southeast Regional Conference, Marietta, Georgia 1998, 280–282.
13. (with Angie Matney) Factoring  $n^4 + 4^n$  with a Braille 'n Speak, *Pi Mu Epsilon Journal*, Volume 10, Spring 1999, number 10, pages 816–818.

14. (with Gerard J. Chang, Bhaskar DasGupta, Martin Fürer, Matthew Koerlin, Yueh-Shin Lee, and Tom Whaley) Characterizations of bipartite Steinhaus graphs, *Discrete Mathematics*, 199 (1999) 11–25. (MR 2000a:05168).
15. (with Jean-Guy Speton and Tom Whaley), Planar Steinhaus Graphs, *Congressus Numerantium*, Vol. 144, 193–206. (MR 2001m:05222).
16. (with Gregory Dresden) Finding Factors of Factor Rings over the Gaussian Integers, *Amer. Math. Monthly*, **112** (2005), no. 7, 602–611.
17. (with Matthew Koerlin, Jean-Guy D. Speton, Tom Whaley, and Jennifer Yanulavich), Disconnected complements of Steinhaus graphs, in preparation.

## Directed Student Work

### Honors Theses

1. Aarstol, Michael P., *Chaos and the dynamics of quadratic mappings*, Honor thesis, 1989.
2. Deighan, John W., *Julia Sets: an introduction to chaos in the plane*, Honor thesis, 1989.
3. Koerlin, Matthew, *A new characterization for bipartite Steinhaus graphs*, Honor thesis, 1995.
4. Yanulavich, Jennifer Ann, *Complements of Steinhaus graphs*, Honor thesis, 1995.
5. Townsend, Elizabeth *Root Quantum Numbers over Hilbertian Fields*, Honor thesis, 2003.

### Senior Theses and Projects

1. Samuel H. McLane II, “Depths and covers of finite sets,” senior thesis, 1989.
2. Heather Leonard, “Planarity Testing,” senior project, 1995.

### Papers by Students under my direction

1. Maxwell, John D., John Marvin Colaw: and the *American Mathematical Monthly*. *Amer. Math. Monthly*, **100** (1993), no. 2, 117–118. (MR 94f:01040).
2. Chandra, Anurag and Noah Egorin (with Wayne M. Dymàček and Tom Whaley), Parallel Searches for hereditary node properties in binary trees, Proceedings of the 36th annual ACM Southeast Regional Conference, Marietta, Georgia 1998, 280–282.
3. Koerlin, Matthew (with Wayne M. Dymàček and Tom Whaley), A survey of Steinhaus graphs, Proceedings of the Eighth Quadrennial International Conference on Graph Theory, Combinatorics, Algorithms and Applications, pages 313–323, Vol. 1, 1998.
4. Matney, Angie (with Wayne M. Dymàček), Factoring  $n^4 + 4^n$  with a Braille 'n Speak, *Pi Mu Epsilon Journal*, Volume 10, Spring 1999, number 10, pages 816–818.
5. Koerlin, Matthew (with Gerard J. Chang, Bhaskar DasGupta, Wayne M. Dymàček, Martin Fürer, Yueh-Shin Lee, and Tom Whaley), Characterizations of bipartite Steinhaus graphs, *Discrete Mathematics*, 199 (1999) 11–25. (MR 2000a:05168).
6. Speton, Jean-Guy (with Wayne M. Dymàček and Tom Whaley), Planar Steinhaus Graphs, *Congressus Numerantium*, Vol. 144, 193–206. (MR 2001m:05222).
7. Koerlin, Matthew, Jean-Guy D. Speton, Jennifer Yanulavich (with Wayne M. Dymàček and Tom Whaley), Disconnected complements of Steinhaus graphs, in preparation.