

Curriculum Vitae

Charles David Leach

May 22, 2007

TEACHING

<u>Date</u>	<u>Title</u>	<u>Institution and Department</u>
2002-present	Assistant Professor	University of West Georgia, Department of Mathematics
Summer 1999	Adjunct Instructor	Auburn University Montgomery, Department of Mathematics
1997-2002	Graduate Teaching Assistant	Auburn University, Department of Discrete and Statistical Sciences

SERVICE TO INSTITUTION

Committee Memberships:

Arts and Sciences Dean's Faculty Advisory Committee, 2004-2006

Mathematics Department Committees:

- Colloquium/Seminar Committee, 2002-2005
- Graduate Committee, 2002-2003, 2004-2005
- Web Site Committee Chair, 2002-2005
- Student/Faculty Activities Committee, 2003-2005, Chair 2004-2005
- Search Committee, 2003-2004, Chair 2006-2007
- Freshman Math Committee, 2004-2005
- Space Committee Chair, 2005

Master of Education Comprehensive Exam Committees:

- Fall 2004 - Margaret Cade
- Summer 2005 - Katie Cobbs
- Summer 2006 - Barbara Spidahl-Kungu
- Summer 2006 - Bonnie Perkins

Education Specialist Committee:

- Summer 2007 - Jamy Juhan

Counseling Experience:

Advisor to undergraduate math majors.

Faculty orientation leader Summer 2007.

Math Department Visitation Day Representative, Spring 2005

Advisement of Student Organizations:

Faculty advisor to the Math Club, 2005-2007.

Participation in Educational Activities:

Attended WAC certification seminar, Fall 2005.

Organized the Math Department Discrete Math Seminar, 2002-2004.

Member of GRAPHNET discussion group.

Co-hosted Integers Conference 2003 and 2005.

Academic Achievement:

<u>Degree</u>	<u>School</u>	<u>Years</u>
B.S. Mathematics	Auburn University-Montgomery	1993-1997
Master of Applied Math	Auburn University	1997-1999
Ph.D.	Auburn University Advisor: Chris A. Rodger Dissertation: Hamilton Decompositions of Complete Multipartite Graphs	1997-2002

Honors:

Scholar-in-Residence, Indiana University-Purdue University Fort Wayne, June 2005.

PROFESSIONAL GROWTH:

Membership and offices in scholastic honoraries:

Phi Kappa Phi National Honor Society, 1997-present.

Membership in Professional Societies:

Institute of Combinatorics and its Applications, Fellow 2007-present
Institute of Combinatorics and its Applications, Associate Fellow 2002-2007
Institute of Combinatorics and its Applications, Member 2001-2002
Mathematical Association of America - 2005-2006.

Publications:

1. Abdollah Khodkar and David Leach, "The Chromatic Number of $K_2(9,4)$ is 11, Journal of Combinatorial Mathematics and Combinatorial Computing, to appear.
2. Clay Culver and David Leach, "Equivalence Classes of 5-Bit Gray Codes", Australasian Journal of Combinatorics, to appear.
3. Matt Walsh and David Leach, "A characterization of lattice-ordered graphs", INTEGERS-Electronic Journal of Combinatorial Number Theory, to appear.
4. D.J. Ashe, David Leach, C. A. Rodger, "2-Regular Leaves of Partial 8-cycle Systems", Australasian Journal of Combinatorics, to appear.
5. Atif Abueida, Sally Clark, and David Leach, "Multidecomposition of the complete graph into graph pairs of order 4 with various leaves", Ars Combinatoria, to appear.
6. Abdollah Khodkar, David Leach, and David Robinson, "Every $(2,r)$ -Regular Graph is Regular", Utilitas Mathematica, to appear.
7. Abdollah Khodkar and C. D. Leach, "On $(2,r)$ -Regular Graphs", Bulletin of the Institute of Combinatorics and its Applications, 46, 27-34 (2006).
8. C. D. Leach, Darryn Bryant, and C. A. Rodger, "Hamilton Decompositions of Complete Bipartite graphs with a 3-Factor Leave", Australasian Journal of Combinatorics, 31, 331-336 (2005).
9. C. D. Leach and C. A. Rodger, "Hamilton Decompositions of Complete Graphs with a 3-Factor Leave", Discrete Math 279: 337-344 (2004).
10. C. D. Leach and C. A. Rodger, "Hamilton Decompositions of Complete Multipartite Graphs with any 2-Factor Leave", Journal of Graph Theory, 44: 208-214 (2003).
11. C. D. Leach and C. A. Rodger, "Fair Hamilton Decompositions of Complete Multipartite Graphs", Journal of Combinatorial Theory Series B 85, 290-296 (2002).
12. C. D. Leach and C. A. Rodger, "Non-disconnecting Disentanglements of Amalgamated 2-factorizations of Complete Multipartite Graphs", Journal of Combinatorial Designs, 9 (2001).
13. Peter D. Johnson, Jr. and David Leach. Problem number 659 of "Problems and Solutions", The College Mathematics Journal. Vol.30, No.4 (September 1999). p. 319.

Presentations:

1. The chromatic number of $K^2(9, 4)$, 38th Southeastern International Conference on Combinatorics, Graph Theory and Computing. Florida Atlantic University. March 2007.
2. Equivalence Classes of 5-Bit Gray Codes, DANGER 2K6, Huntingdon College, July 2006.
3. "Lattice-Ordered Graphs", Integers Conference 2005 Invited speaker, University of West Georgia, October 2005.
4. "Adjacency Matrices, Non-Adjacency Matrices, and $(2,r)$ -Regular Graphs", IPFW Department of Mathematical Sciences Invited Colloquium, June 2005.
5. "Order 4 graph pair multidecompositions of K_n with various leaves". 36th Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, March 2005.
6. "Hamilton Decompositions of Complete Bipartite Graphs with a 3-Factor Leave". 35th Southeastern International Conference on Combinatorics, Graph Theory and Computing. Florida Atlantic University. March 2004
7. "Fair Hamilton Decompositions." 33rd Southeastern International Conference on Combinatorics, Graph Theory and Computing. Florida Atlantic University. March 2002.
8. "Hamilton Cycles of $K_{n,n} \setminus 2$ -factor". 31st Southeastern International Conference on Combinatorics, Graph Theory and Computing. Florida Atlantic University. March 2000.

Editorships:

Refereed papers for 6 scholarly journals:

- Discrete Math, 1 paper, 2003
- Ars Combinatoria, 2 papers, 2004 and 2006
- Australasian Journal of Combinatorics, 1 paper, 2006
- Integers-Electronic Journal of Combinatorial Number Theory, 1 paper, 2004
- Utilitas Mathematica, 2 papers, 2005 and 2007
- Bulletin of the Institute of Combinatorics and its Applications, 1 paper, 2005

Works in progress:

- A bit-string composition problem with application to electrical timing devices
- Partially ordered sets of induced subgraphs