

Curriculum Vitae

Name: **Abdollah Khodkar, Professor of Mathematics**

Address for correspondence: Department of Computing and Mathematics, University of West Georgia, Carrollton, GA 30118

Phone: 1-404-384-6131

Fax: 678-839-6490

Email Address: akhodkar@westga.edu

Academic Achievements

- Ph.D. Mathematics (Combinatorics), The University of Queensland, Australia, 1994.
Research Project: Balanced block designs and various properties.
- M.Sc. Mathematics, Sharif University of Technology, Iran, 1988.
Research Project: Partial Differential Equations.
- B.Sc. Applied Mathematics, Sharif University of Technology, Iran, 1986.
Final Project: Numerical solutions for some differential equations.

Employment History

- Assistant Chair: Department of Mathematics, University of West Georgia, September 2017 – Spring 2020.
- Professor: Department of Mathematics, University of West Georgia, August 2011 – present.
- Associate Professor: Department of Mathematics, University of West Georgia, August 2006 – August 2011.
- Assistant Professor: Department of Mathematics, University of West Georgia, August 2004 – August 2006.
- Research Fellow Level B: Department of Mathematics, The University of Queensland, January 2002 – August 2004.
- Lecturer Level B: Department of Mathematics, The University of Queensland, January 2002 – December 2002, July 2000 – July 2001.
- Visiting Professor: Department of Mathematics, Illinois State University, August 2001 – December 2001.
- Lecturer Level A: Department of Mathematics, The University of Queensland, January 2000 – July 2000.
- Research Officer Level A: Department of Mathematics, The University of Queensland, July 1995 – December 1999.
- Senior Research Assistant/Computer Programmer: Information Security Research Center within the Faculty of Information Technology, Queensland University of Technology, Australia, July 1994 – July 1995.

- Research Assistant: Department of Mathematics, The University of Queensland, December 1993 – July 1994.
- Academic Visitor: Department of Mathematics, The University of Queensland, January 1991 – January 1992.
- Part-Time Lecturer: Faculty of Environmental Sciences, Griffith University, January 2000 – July 2000, Department of Mathematics, The University of Queensland, July 1999 – December 2000, February 1997 – July 1997, Sharif University of Technology (Iran), January 1988 – January 1991.
- Tutorial Assistant: Department of Mathematics, Queensland University of Technology, February 1995 – July 1995, Department of Mathematics, The University of Queensland, January 1993 – December 1993.
- Tutor: Sharif University of Technology (Iran), January 1985 – January 1988.
- Teacher: Farzin High School (Iran), September 1980 – January 1985.

Courses Taught

- **Graduate Courses:** Linear Algebra II, Abstract Algebra I, Abstract Algebra II, Coding Theory and Cryptography III, Geometries and Designs, and Discrete Mathematics.
- **Undergraduate Courses:** Quantitative Skills and Reasoning, College Algebra, Survey of Calculus, Calculus I, II, III, A Transition to Advanced Mathematics, Mathematics for the Environment, Differential Equations, Set Theory, Number Theory, Linear Algebra I, Algebra I, and Graph Theory.
- **Online Course Development:** I developed “College Algebra” (Math 1111), “Survey of Calculus” (MATH 1413) and Pre-calculus (Math 1113) online for undergraduate students in 2008-2009 and “Non-Euclidean Geometry” (MATH 6233) online in 2010 for graduate students.

Graduate Student Research Direction

- Co-advisor: Dr. Nicholas J. Cavenagh (Advisor: Dr D. Donovan), Department of Mathematics, the University of Queensland (2001-2004). This supervision proved extremely productive with four joint papers.
- Co-advisor: Dr. Mahmoud Sheikholeslami (Advisor: Dr M.A. Shahabi), Department of Mathematics, University of Azarbaijan, Iran (2000-2003). This supervision led to three joint publications.
- Co-advisor: Ms. Arezou Ghameshlou (Advisor: Dr S.M. Sheikholeslami), Department of Mathematics, Azarbaijan University of Tarbiat Moallem, Iran (2006-2010). This supervision led to three joint publications.
- Co-advisor: Ms. Maryam Atapour (Advisor: Dr S.M. Sheikholeslami), Department of Mathematics, Azarbaijan University of Tarbiat Moallem, Iran (2008-13). This supervision led to four joint publications.

- Co-advisor: Ms. Hamideh Aram (Advisor: Dr S.M. Sheikholeslami), Department of Mathematics, Azarbaijan University of Tarbiat Moallem, Iran (2009-14).
- Co-advisor: Mr. Hossein Karami (Advisor: Dr S.M. Sheikholeslami), Department of Mathematics, Azarbaijan University of Tarbiat Moallem, Iran (2009-2014). This supervision led to eight joint publications.

Undergraduate Student Research Direction

- Research Experiences for Undergraduates (REU) at UWG, 2014–2016.
- UWise Student Research Program Fall 2015-Spring 2016: Students: Hannah Watkins, Stephanie Burford.
- LSAMP (Louis Stokes Alliances for Minority Participation) Fall 2015: Student: John Harrison
- UWise Student Research Program Fall 2014-Spring 2015: Students: Lauren Eckles, Steven Redolfi, Mackenzie Peluso and Kenneth Weathington.
- UWise Student Research Program Spring 2014: Students: Dana Colins, Daniel Hartman and Alexis Wagner.
- UWise Student Research Program Spring 2013: Students: Tessa Gromoll, Dana Colins and Daniel Hartman.
- Research Experiences for Undergraduates (REU) at UWG, 2007–2009.
- GEMS Research Fellowship Program, UWG (Summer 2006, 2007, 2008) UWG. Students: Staci Sisk, Taeler Porter and Scott Gildemeyer, Joshua Ramsey.

Other Professional Experience

- Reviewer for Mathematical Reviews.
- Nominated as an “Expert of International Standing” by Australian Research Council (ARC): Assessor for Discovery Projects Scheme Grant Applications.
- Organizing Conferences:
 - A member of the Organizing Committee for the Georgia Academy of Science Annual Meeting April 2018, University of West Georgia.
 - The chair of the Organizing Committee of the 31st Midwestern Conference on Combinatorics and Combinatorial Computing, October 20-22, 2017, University of West Georgia, Carrollton, GA.
 - A member of the Organizing Committee of the Integer Conference October 24-27, 2007 and the Integer Conference October 12-15, 2005, University of West Georgia Carrollton, GA.

- Secretary of the Organizing Committee of the 13th Australasian Workshop on Combinatorial Algorithms (AWOCA2002). Member of the Program Committee and a co-editor of the Proceedings of AWOCA. Co-editor of the Proceedings of the 37th Annual Iranian Mathematics Conference (AIMC37).
- Invited Speaker:
 - Workshop on “Graph decompositions and related trade structures”, The University of Queensland, Australia (July 2007).
 - Invited Speaker: The 37th Annual Iranian Mathematics Conference, Azarbaijan University of Tarbiat Moalem (September 2006).
 - Invited Lecturer: Ramkhamheang University (Thailand), March 1999 – April 1999.
- Referee for Journals: Journal of Combinatorial Theory Ser A; Discrete Mathematics; Journal of Combinatorial Designs; Graphs and Combinatorics; Discrete Applied Mathematics; The International Journal of Mathematics and Computer Science; Utilitas Mathematica; Ars Combinatoria; Australasian Journal of Combinatorics; Journal of Statistical Planning and Inference; Integers: Electronic Journal of Combinatorial Number Theory; Global Journal of Pure and Applied Mathematics; Bulletin of the Institute of Combinatorics and its Applications; Discussiones Mathematicae Graph Theory; Iranian Journal of Science and Technology.
- Associate Editor for International Journal of Applied Mathematics and Statistics (IJAMAS) (2005-2006).

Service Committees

Departmental Service

- Mathematics Department Representative at the Preview Day, April 23, 2017.
- Search Committee: Tenure Track Positions (2004-2006 member, 2013 and 2015 Chair)
- Advisory Committee (2014-2016, 2017-2018)
- Technology Committee (Fall 2014 member)
- Center for Applied Mathematics and Science (2009-2015 member)
- Ad Hoc Committee for Standardized Finals (2009-2010 member)
- Department Advisory Committee (2008-2012, 2014 member)
- Scholarship Committee (2005-2006, 2008-2010 member), (2007, 2008, 2016-2017 Chair)
- Department Tenure and Promotion Committee (2006-2007, 2009-2013 member, 2008-2009, 2013 (Chair), 2014-2016)
- Full Professor Promotion Committee (2013-2014 Chair)
- Assessment Committee (2006-2010 Chair, 2010-2014 member)

- Graduate Committee (2004-2016 member)
- Seminar/Colloquium Committee (2005-2008 member)

University Service

- COSM Advisory Committee (Fall 2017-Fall 2018)
- University Faculty Senate (Fall 2017-Fall 2019)
- Graduate Program Committee (Fall 2017-Fall 2019)
- Online Advisory Group: College of Sciences and Mathematics Representative (Fall 2016-present)
- Search Committee: College of Sciences and Mathematics Dean's Position (Spring 2015 member)
- Widening Implementation and Demonstration of Evidence Based Reforms (WIDER) College Committee (Spring 2014-present, member).
- College Advisory Committee (2013-2014, member)
- College of Sciences and Mathematics Awards Committee (2011, member).
- UWG Post-Tenure Review Appeals Committee (2008-2009, member)
- COAS Tenure and Promotion Committee (2006-2008, 2009-2011, 2012-2013, member)
- Faculty Advisory Committee (2006-2007-2008, member)
- Writing Across the Curriculum Committee (2005-2008, member)
- Student Advisor: College Student Inventory, CSI (2006-2007)
- Early Transfer Orientation for Spring Semester 2005, member
- New Freshmen Orientation, Fall 2005, 2006
- Liaison to Other Sciences (2005-2006)

Membership

- The Institute of Combinatorics and its Applications
- American Mathematical Society
- Australian Mathematical Society
- Iranian Mathematical Society

Computing Experience

Very good knowledge of: C Language, Fortran 90, Latex, Matlab, Mathematica, Maple, Magma, CPLEX, Otter.

Awards

- Student Research Assistant Program (SRAP) Academic Year 2021 (Fund \$1400).
- Student Research Assistant Program (SRAP) Academic Year 2019 (Fund \$1450).
- Student Research Assistant Program (SRAP) Summer 2019 (Fund \$1500).
- Student Research Assistant Program (SRAP) Summer 2020 (Fund \$1800).
- NSF Conference Grant DMS 1738392, The 31st Midwest Conference on Combinatorics and Combinatorial Computing, October 20-22, University of West Georgia, Award \$18,750.
- **NSF REU Grant**, “Problems in Combinatorics, Number Theory and Graph Theory”, 2014-2016, Fund \$229,699.
- **COSM Faculty Research Grant 2014-2016:** University of West Georgia, Fund \$1250.
- **COSM Faculty Research Grant 2013-2014:** University of West Georgia, Fund \$1250.
- **Undergraduate Research Grant Spring 2015 Funded by the UWide UGRP (FY15) Program:** University of West Georgia, Fund \$8000.00.
- **Undergraduate Research Grant Spring 2014 Funded by the UWide UGRP (FY14) Program:** University of West Georgia, Fund \$7000.00.
- **Undergraduate Research Grant Spring 2013 Funded by the UWide UGRP (FY13) Program:** University of West Georgia, Fund \$7000.00.
- **College of Science and Mathematics Research Award 2011-2012:** University of West Georgia, Fund \$1000.00.
- **Online Course Development Grant Summer 2010:** Non-Euclidean Geometry, University of West Georgia, Fund \$5000.00.
- **College of Science and Mathematics Excellence in Scholarship 2009-2010:** University of West Georgia, Fund \$500.00.
- **Raybould Visiting Fellowship 2010, 2013, 2016:** School of Mathematics and Physics, the University of Queensland, Australia (September 2010), Fund \$4000.00 each visit.
- **College of Arts and Sciences Faculty Research Grant 2009-2010:** University of West Georgia, Fund \$500.00.
- **NSF REU Grant**, “Problems in Combinatorics, Number Theory and Graph Theory”, 2007-2009, Fund \$216,422.
- **Faculty Research Grant:** University of West Georgia, 2005-2006 (Fund \$1500.00), 2007-2008 (Fund \$1500.00), 2010-2011 (Fund \$1000.00).
- Overseas Postgraduate Research Scholarship for PhD in Combinatorics from Australian government, January 1992-1994.

- Departmental Scholarship: Department of Mathematics, the University of Queensland, 1992-1994.
- University Scholarship: Sharif University of Technology, Iran, 1986-1988.

Presentations

I have presented papers at the international conferences and research centers including:

- 53rd Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, March 7-11, 2022
- The 50th, 49th, 48th, 40th and 38th SE International Conference on Combinatorics, Graph Theory, and Computing, Florida Atlantic University, March 2019, 2018, 2017, 2009, 2007;
- The Midwest Conference on Combinatorics and Combinatorial Computing in October 2018, 2016, 2015, 2014, 2005, 2001, 1997;
- American Mathematical Society Central Fall Sectional Meeting Loyola University, Chicago 2015;
- IPM Combinatorics and Computing Conference, Tehran, Iran, May 2015.
- The first IPM-Isfahan workshop on Combinatorics June 2014;
- Workshop on Combinatorial Trades, The University of Queensland, Australia July 2007, September 2010;
- Math Day, University of West Georgia April 2010;
- Integers Conference, University of West Georgia October 2009;
- Mathematical Abundance: Designs, Graphs and Number Theory, Illinois State University April 2008;
- 21st British Combinatorial Conference, University of Reading July 2007;
- The 37th Annual Iranian Mathematics Conference, Tabriz, 2006;
- American Mathematical Society, Atlanta 2005;
- Australasian Workshop on Combinatorial Algorithms(2002);
- Australasian Conference on Combinatorial Mathematics and Combinatorial Computing (1993, 1996, 1998, 1999, 2000).

I have also presented papers at different universities including:

USA: Illinois State University (1997, 2001, 2003, 2006, 2008, 2009), University of Illinois (1997, 2003), Auburn University (1997, 2006, 2008, 2009), University of West Georgia (2004, 2005, 2014, 2015, 2016, 2017, 2018)

Australia: The University of Queensland, 1995, 1999, 2001, 2007 (invited colloquium), 2010 (invited colloquium), 2013 (invited colloquium), 2016 (invited colloquium)

Iran: The University of Mohaghegh Ardabili, Iran, May 2018; Sharif University of Technology, 1997, 2001, 2003, 2005-2008, 2010 (invited colloquium); University of Mazandaran (2005 (invited colloquium)); Shahid Madani University of Tarbiat Moallem, 2005-2008, 2010, 2011, 2015, 2017, 2018 (all invited colloquium), Tabriz University, 2005 (invited colloquium)

Thailand: Ramkhamheang University (1999)

Canada: Defence Center at the University of Manitoba (1997), the University of Manitoba (1997)

References

- Dr. Bruce Landman: Department of Mathematics, Augusta University
Email: blandman@augusta.edu, Phone: 1-678-458-8832
- Dr. Minh Nguyen: Department of Mathematics and Statistics, University of Arkansas
Email: mvnguyen1@ualr.edu, Phone: 1-501-569-3443
- Dr Chris Rodger: Department of Discrete, and Statistical Sciences, Auburn University
Email: rodgec1@mail.auburn.edu, Phone: 1-334-844-3746
- Dr Saad I. El-Zanati: Department of Mathematics, Illinois State University,
Email: saad@ilstu.edu, Phone: 1-309-438-5765
- Dr. David Leach: Department of Mathematics, University of West Georgia,
Email: cleach@westga.edu, Phone: 1-678-839-4127

PUBLICATIONS

Monograph

J. C. George, A. Khodkar and W. D. Wallis, *Pancyclic and bipancyclic graphs* Springer Briefs in Mathematics, Springer, (2016) ISBN: 978-3-319-31950-6; ; 978-3-319-31951-3 05-02 (05C38)

Research papers

1. A. Khodkar, *Construction of some balanced ternary designs from one factorizations*, Utilitas Mathematica **42** (1992), 213–217.
2. A. Khodkar, *Balanced ternary designs with holes and numbers of common triples*, Australasian Journal of Combinatorics **7** (1993), 111–122.
3. A. Khodkar, *The fine structure of balanced ternary designs with block size three*, Utilitas Mathematica **44** (1993), 197–230.
4. E.J. Billington, A. Khodkar and E.S. Mahmoodian, *Balanced ternary designs with block size four*, Journal of Statistical Planning and Inference **37** (1993), 95–126.
5. A. Khodkar, *Various super-simple designs with block size four*, Australasian Journal of Combinatorics **9** (1994), 201–210.

6. A. Khodkar, *Balanced block designs and various properties*, Bulletin of the Australian Mathematical Society **50** (1994), No. 2, 349–350.
7. A. Khodkar, *Number of common triples in simple balanced ternary designs*, Ars Combinatoria **40** (1995), 235–246.
8. A. Khodkar, *Smallest defining sets for the 36 non-isomorphic twofold triple systems of order nine*, Journal of Combinatorial Mathematics and Combinatorial Computing **17** (1995), 209–215.
9. A. Khodkar, *Twofold triple systems having a prescribed number of triples in common*, Utilitas Mathematica **48** (1995), 203–214.
10. E. Dawson and A. Khodkar, *On burst-error correcting algorithm for Reed-Solomon codes*, Electronics Letters **31** No. 11 (1995), 848–849.
11. J. Golić, M. Salmasizadeh, M. Clark, A. Khodkar and E. Dawson, *Discrete Optimisation and Fast Correlation Attacks*, Preproceedings of CPAC 1995, Queensland University of Technology, 3–5 July 1995, 527–538.
12. A. Khodkar, *The fine structure of $(v, 3)$ directed triple systems: $v \equiv 0$ or $1 \pmod{3}$* , Ars Combinatoria **43** (1996), 213–224.
13. J. Golić, M. Salmasizadeh, E. Dawson and A. Khodkar, *Cryptanalysis of the summation generator with three input LFSRs*, Proceedings of International Symposium on Information Theory and Its Application 1996, volume 1, pages 343–346. the University of Victoria, 1996.
14. P. Adams, D.E. Bryant and A. Khodkar, *On the existence of super-simple designs with block size 4*, Aequationes Mathematicae **51** (1996), 230–246.
15. D.E. Bryant and A. Khodkar, *A census of $(9; 1; 3, 2)$ balanced ternary designs*, Journal of Combinatorial Mathematics and Combinatorial Computing **23** (1997), 153–160.
16. P. Adams, D.E. Bryant, A. Khodkar and S.I. El-Zanati, *The intersection problem for 3-cubes*, Australasian Journal of Combinatorics **15** (1997), 127–134.
17. P. Adams, D.E. Bryant and A. Khodkar, *Uniform 3-Factorisations of K_{10}* , Congressus Numerantium **127** (1997), 23–32.
18. D.E. Bryant and A. Khodkar, *On orthogonal double covers of graphs*, Designs, Codes and Cryptography **13** (1998), 103–105.
19. P. Adams, D.E. Bryant and A. Khodkar, *3, 5-cycle decompositions*, Journal of Combinatorial Designs **6** (1998), 91–110.
20. A. Khodkar and D.G. Hoffman, *On the non-existence of Steiner $(v, k, 2)$ trades with certain volumes*, Australasian Journal of Combinatorics **18** (1998), 303–311.
21. A. Khodkar, *On smallest critical sets for the elementary abelian 2-group*, Utilitas Mathematica **54** (1998), 45–50.
22. D.E. Bryant and A. Khodkar, *5-cycle systems of $K_v \setminus F$ with a hole*, Utilitas Mathematica **54** (1998), 59–73.

23. D.E. Bryant, H.L. Fu and A. Khodkar, *(m, n)-cycle systems*, Journal of Statistical Planning and Inference **74** (1998), 365–370.
24. P. Adams, D.E. Bryant and A. Khodkar, *On the number of repeated triples in balanced ternary designs with index two*, Utilitas Mathematica **55** (1999), 55–64.
25. D.E. Bryant, A. Khodkar and S.I. El-Zanati, *Small embeddings for partial G-designs when G is bipartite*, Bulletin of the Institute of Combinatorics and its Applications **26** (1999), 86–90.
26. N. Hamilton and A. Khodkar, *On minimum possible volumes of strong Steiner trades*, Australasian Journal of Combinatorics **20** (1999), 197–203.
27. D.E. Bryant and A. Khodkar, *Maximum packings of $K_v - K_u$ with triples*, Ars Combinatoria **55** (2000), 259–270.
28. P. Adams, D.E. Bryant and A. Khodkar, *The fine structure of balanced ternary designs with block size three, index three and $\rho_2 = 1, 2$* , Ars Combinatoria **56** (2000), 299–308.
29. P. Adams and A. Khodkar, *Smallest critical sets for the groups of size eight*, Journal of Combinatorial Mathematics and Combinatorial Computing **32** (2000), 23–32.
30. P. Adams, D.E. Bryant and A. Khodkar, *The spectrum problem for λ -fold Petersen graph designs*, Journal of Combinatorial Mathematics and Combinatorial Computing **34** (2000), 159–176.
31. P. Adams, D.E. Bryant and A. Khodkar, *The spectrum problem for closed m-trail systems, $m \leq 10$* , Journal of Combinatorial Mathematics and Combinatorial Computing **34** (2000), 223–240.
32. P. Adams, D.E. Bryant and A. Khodkar, *On Alspach's conjecture with two even cycle lengths*, Discrete Mathematics **223** (2000), 1–12.
33. P. Adams, D.E. Bryant and A. Khodkar, *The fine structure of $(v, 3)$ directed triple systems: $v \equiv 2 \pmod{3}$* , Ars Combinatoria **57** (2000), 3–11.
34. P. Adams, E.J. Billington, D.E. Bryant and A. Khodkar, *The μ -way intersection problem for m-cycle systems, $\mu \geq 3$* , Discrete Mathematics **231** (2001), 27–56.
35. A. Khodkar and S. Zahrai, *On single laws for varieties of quasigroups associated with 2-perfect extended cycle systems*, Communications in Algebra **29** (2001), 1669–1676.
36. P. Adams and A. Khodkar, *Smallest critical sets for the latin squares of orders six and seven*, Journal of Combinatorial Mathematics and Combinatorial Computing **37** (2001), 225–237.
37. P. Adams, A. Khodkar and C. Ramsay, *Smallest defining sets of some STS(19)*, Journal of Combinatorial Mathematics and Combinatorial Computing, **38** (2001), 225–230.
38. D.E. Bryant and A. Khodkar, *On the intersection problem for 1-factorizations and near 1-factorizations of K_v* , Utilitas Mathematica **60** (2001), 209–218.
39. P. Adams and A. Khodkar, *Smallest weak and smallest totally weak critical sets in the latin squares of order at most seven*, Ars Combinatoria **61** (2001), 287–300.

40. P. Adams and A. Khodkar, *On the direct product of two weak uniquely completable partial latin squares*, *Utilitas Mathematica* **60** (2001), 249–253.
41. A. Khodkar and S. Zahrai, *On single laws for varieties of groupoids associated with strongly 2-perfect m -cycle systems*, *Algebra Universalis* **46** (2001), 499–513.
42. D.M. Donovan, C.M. Fu and A. Khodkar, *A discussion of 2-critical sets in Abelian 2-groups*, Proceedings of the Twelfth Australasian Workshop on Combinatorial Algorithms (AWOCA2001), Ed. Edy Tri Baskoro, Institut Teknologi, Bandung Indonesia, 2001, 88–97.
43. P. Adams, R. Bean and A. Khodkar, *Disjoint critical sets in Latin squares*, *Congressus Numerantium* **153** (2001), 33–48.
44. D. Donovan and A. Khodkar, *Premature Partial Latin Squares and Critical Sets*, Proceedings of the Thirteenth Australasian Workshop on Combinatorial Algorithms (AWOCA2002), Eds. E.J. Billington, D. Donovan and A. Khodkar, the University of Queensland, Queensland Australia, 2002, 115–126.
45. D. Donovan, R.A.H. Gower, A. Khodkar, *Latin Interchanges and Direct Products*, *Ars Combinatoria* **64** (2002), 271–287.
46. D. Bryant and A. Khodkar, *Orthogonal quasigroups associated with m -cycle systems*, *Bulletin of the Institute of Combinatorics and its Applications* **36** (2002), 109–112.
47. R. Bean, D. Donovan, A. Khodkar and A.P. Street, *Steiner trades that give rise to completely decomposable latin interchanges*, *International Journal of Computer Mathematics* **79** (2002), 1273–1284.
48. D.M. Donovan, A. Khodkar, S. Sutinuntopas and S. Thappia, *A note on critical sets in latin squares of order $2^n - 1$* , *Congressus Numerantium* **159** (2002), 215–219.
49. D.M. Donovan, A. Khodkar and A.P. Street, *On minimal defining sets in $AG(d, 3)$* , in *Designs 2003: further combinatorial and constructive design theory* (edited W.D. Wallis) Kluwer Academic Press, Norwell, Massachusetts, USA, 2003, 103–131.
50. D.M. Donovan, A. Khodkar and A.P. Street, *Doubling and tripling constructions for defining sets in Steiner triple systems*, *Graphs and Combinatorics* **19** (2003), 65–89.
51. A. Khodkar, M.A. Shahabi and S.M. Sheikholeslami, *2-critical sets for a class of groups*, *Congressus Numerantium* **164** (2003), 53–64.
52. N.J. Cavenagh and A. Khodkar, *Balanced critical sets in Latin squares*, *Utilitas Mathematica* **64** (2003), 229–249.
53. D. Donovan and A. Khodkar, *Product constructions for critical sets in latin squares*, Proceedings of the Fifteenth Midwest Conference on Combinatorics, Cryptography and Computing (Las Vegas, NV, 2001), *Journal of Combinatorial Mathematics and Combinatorial Computing* **46** (2003), 227–254.
54. P. Adams, R. Bean and A. Khodkar, *A census of critical sets in the Latin squares of order at most six*, *Ars Combinatoria* **68** (2003), 203–223.

55. A. Khodkar, M.A. Shahabi and S.M. Sheikholeslami, *Families of 2-critical sets for dihedral groups*, Australasian Journal of Combinatorics **29** (2004), 173–186.
56. A. Khodkar and S. Zahrai, *2-perfect m -cycle systems can be defined by single laws*, Bulletin of the Institute of Combinatorics and its Applications **40** (2004), 40–48.
57. D.M. Donovan and A. Khodkar, *Uniform critical sets in Latin squares*, Journal of Combinatorial Mathematics and Combinatorial Computing **48** (2004), 3–23.
58. N.J. Cavenagh, A. Khodkar, S.I. El-Zanati and C. Vanden Eynden, *On a generalization of the Oberwolfach Problem*, Journal of Combinatorial Theory Ser. A **106** (2004), 255–275.
59. D.M. Donovan, C.M. Fu and A. Khodkar, *An investigation of 2-critical sets in Latin squares*, Ars Combinatoria **72** (2004), 223–234.
60. D. Donovan, C. Hamalainen, A. Khodkar and N. Cavenagh, *On greedy critical sets in latin squares*, AWOCA, Proceedings of fifteenth Australasian Workshop on Combinatorial Algorithms, 6–9 July 2004, University of Sydney, Editor Seok-Hee Hong.
61. A. Khodkar, S.M. Sheikholeslami and H. Hasanzadeh, *Bounds on double domination numbers of graphs*, Congressus Numerantium **177** (2005), 77–87.
62. A. Khodkar and D. Leach, *On $(2, r)$ -regular graphs*, Bulletin of the Institute of Combinatorics and its Applications **46** (2006), 27–34.
63. D. Mojdeh, A. Ahmadi Haji, H. Abdollahzadeh Ahangar and A. Khodkar, *The graph $K_{2,2,r}$ has the property $M(3)$ for $4 \leq r \leq 8$* , Bulletin of the Institute of Combinatorics and its Applications **47** (2006), 63–70.
64. D. Mojdeh, N. Jafari Rad and A. Khodkar, *The defining numbers for vertex colorings of certain graphs*, Australasian Journal of Combinatorics **35** (2006), 17–30.
65. R. Khoeilar, S.M. Sheikholeslami and A. Khodkar, *The forcing semi- H -cordial numbers of certain graphs*, Journal of Combinatorial Mathematics and Combinatorial Computing **59** (2006), 151–164.
66. A. Khodkar, D. Mojdeh and A.P. Kazemi, *Domination in Harary graphs*, Bulletin of the Institute of Combinatorics and its Applications **49** (2007), 61–78.
67. A. Khodkar and S.M. Sheikholeslami, *On perfect double dominating sets in grids, cylinders and tori*, Australasian Journal of Combinatorics **37** (2007), 131–139.
68. N.J. Cavenagh, D.M. Donovan and A. Khodkar, *On the spectrum of critical sets in back circulant latin squares*, Ars Combinatoria **82** (2007), 287–319.
69. A. Khodkar and S.M. Sheikholeslami, *The forcing domination numbers of some graphs*, Ars Combinatoria **82** (2007), 365–379.
70. A. Khodkar and R. Xu, *More on even $[a, b]$ -factors in graphs*, Discussiones Mathematicae Graph Theory **27** (2007), 193–204.
71. M. Atapour, A. Khodkar and S.M. Sheikholeslami, *Characterization of double domination subdivision number of trees*, Discrete Applied Mathematics **155** (2007), 1700–1707.

72. A. Khodkar and B. Landman, *Recent Progress in Ramsey Theory on the Integers*, Integers: Electronic Journal of Combinatorial Number Theory (2007), 305–313.
73. D. Mojdeh, A. Ahmadi Haji, H. Abdollahzadeh Ahangar and A. Khodkar, *Graphs $K_{1*4,5}$, $K_{1*5,4}$, $K_{1*4,4}$, $K_{2,3,4}$ have the property $M(3)$* , Ars Combinatoria **84** (2007), 171–190.
74. A. Khodkar, D. Leach and D. Robinson, *Every $(2, r)$ -regular graph is regular*, Utilitas Mathematica **73** (2007), 169–172.
75. H. Karami, A. Khodkar, and S.M. Sheikholeslami, *Trees whose double domination number is twice their domination number*, Congressus Numerantium **186** (2007), 49–56.
76. A. Khodkar and W. de Launey, *On the Range of Influences in Back-Circulant Latin Squares*, Discrete Mathematics **308** (2008), 2896–2900.
77. N. Cavenagh, D. Donovan, A. Khodkar and J. van Rees, *When is a partial latin square uniquely completable, but not its completable product?*, Discrete Mathematics **308** (2008), 2830–2843.
78. H. Karami, A. Khodkar, R. Khoeilar and S.M. Sheikholeslami, *Trees whose total domination subdivision numbers is one*, Bulletin of the Institute of Combinatorics and its Applications, **53** (2008), 57–67.
79. H. Karami, A. Khodkar and S.M. Sheikholeslami, *Some notes on signed edge domination in graphs*, Graphs and Combinatorics, **24** (2008), 29–35.
80. H. Karami, A. Khodkar, and S.M. Sheikholeslami, *Signed edge majority domination numbers in graphs*, Australasian Journal of Combinatorics **41** (2008), 291–296.
81. D.M. Donovan, N. Cavenagh and A. Khodkar, *Minimal defining sets of 1-factorizations of complete graphs*, Utilitas Mathematica **76** (2008), 191–211.
82. M. Atapour, S.M. Sheikholeslami, A. Hansberg, L. Volkmann and A. Khodkar, *2-domination subdivision number of graphs*, AKCE International Journal of Graphs and Combinatorics **5** (2008), 169–177.
83. A. Khodkar, B.P. Mobaraky and S.M. Sheikholeslami, *Upper bounds for the Roman domination subdivision number of a graph*, AKCE International Journal of Graphs and Combinatorics **5** (2008), 7–14.
84. H. Karami, A. Khodkar and S.M. Sheikholeslami, *Lower bounds on signed edge total domination numbers in graphs*, Czechoslovak Mathematical Journal **58**(133) (2008), 595–603.
85. H. Karami, A. Khodkar, and S.M. Sheikholeslami, *Lower bounds on signed domination numbers of directed graphs*, Discrete Mathematics **309** (2009), 2567–2570.
86. H. Karami, A. Khodkar, and S.M. Sheikholeslami, *An improved upper bound for signed edge domination numbers in graphs*, Utilitas Mathematica **78** (2009), 121–128.

87. A.N. Ghameshlou, A. Khodkar, R. Saei and S.M. Sheikholeslami, *Negative k -subdecision numbers in graphs*, AKCE International Journal of Graphs and Combinatorics **6** (2009), 361–371.
88. S. Cichacz, D. Froncek, A. Khodkar and W. Xu, *Super edge-graceful paths and cycles*, Bulletin of the Institute of Combinatorics and its Applications **57** (2009), 79–90.
89. H. Karami, A. Khodkar and S.M. Sheikholeslami, *Signed edge domination numbers in trees*, Ars Combinatoria **93** (2009), 451–457.
90. M. Atapour, S.M. Sheikholeslami and A. Khodkar, *Roman domination subdivision numbers of graphs*, Aequationes Mathematicae **78** (2009), 237–245.
91. H. Karami, R. Khoeilar, S.M. Sheikholeslami and A. Khodkar, *An upper bound for the total domination subdivision numbers in graphs*, Graphs and Combinatorics **25** (2009), 727–733.
92. K. Ventullo and A. Khodkar, *A three dimensional silver cube of order seven*, Bulletin of the Institute of Combinatorics and its Applications **56** (2009), 81–84.
93. A. Khodkar and D. Leach, *The chromatic number of $K^2(9, 4)$ is 11*, Journal of Combinatorial Mathematics and Combinatorial Computing **70** (2009), 217–220.
94. A. Khodkar, S. Nolen and J.T. Perconti, *Super Edge-Graceful Labelings of Complete Bipartite Graphs*, Australasian Journal of Combinatorics **46** (2010), 241–261.
95. A.N. Ghameshlou, A. Khodkar, R. Saei and S.M. Sheikholeslami, *Signed (b, k) -edge covers in graphs*, Intelligent Information Management **2** (2010), 143–148.
96. M. Atapour, S.M. Sheikholeslami and A. Khodkar, *Trees whose Roman domination subdivision number is 2*, Utilitas Mathematica **82** (2010), 227–240.
97. A.N. Ghameshlou, A. Khodkar and S.M. Sheikholeslami, *The signed bad numbers in graphs*, Discrete Mathematics, Algorithms and Applications **3** (2011), 33–41.
98. E.J. Billington and A. Khodkar, *Twofold 2-perfect 8-cycle systems with an extra property*, Journal of Combinatorial Mathematics and Combinatorial Computing **77** (2011), 243–252.
99. M. Atapour, S.M. Sheikholeslami and A. Khodkar, *Global signed total domination in graphs*, Publicationes Mathematicae Debrecen **79** (2011), 7–22.
100. A. Khodkar, *Super Edge-Graceful Labelings of Complete Tripartite Graphs*, Journal of Combinatorial Mathematics and Combinatorial Computing **76** (2011), 137–158.
101. H. Karami, A. Khodkar, and S.M. Sheikholeslami, *An upper bound for total domination subdivision numbers*, Ars Combinatoria **102** (2011), 321–331.
102. A. Khodkar and K. Vinhage, *Super edge-graceful labelings of total stars and total cycles*, Journal of Combinatorial Mathematics and Combinatorial Computing **76** (2011), 233–247.
103. A. Khodkar and S.M. Sheikholeslami, *Signed total k -domatic numbers of graphs*, Journal of the Korean Mathematical Society **48** (2011), 551–563.

104. A. Carney and A. Khodkar, *Signed edge k -domination numbers in graphs*, Bulletin of the Institute of Combinatorics and its Applications **62** (2011), 66–78.
105. E.J. Billington, N. Cavenagh and A. Khodkar, *Super-simple twofold 4-cycle systems*, Bulletin of the Institute of Combinatorics and its Applications **63** (2011), 48–50.
106. D. Donovan, J. Lefevre, T. McCourt, N. Cavenagh and A. Khodkar, *Identifying flaws in the security of critical sets in Latin squares via triangulations*, Australasian Journal of Combinatorics **52** (2012), 243–268.
107. N. Jafari Rad and A. Khodkar, *$3-\gamma_t$ -critical connected graphs of diameter 3*, Discrete Applied Mathematics **160** (2012), 676–681.
108. E.J. Billington, A. Khodkar and C.C. Lindner, *Complete sets of metamorphoses: paired stars into 4-cycles*, Journal of Combinatorial Mathematics and Combinatorial Computing **80** (2012), 457–466.
109. A. Khodkar, R. Rasi and S.M. Sheikholeslami, *Super edge-gracefulness of complete graphs*, Utilitas Mathematica **87** (2012), 207–233.
110. M. Atapour, S.M. Sheikholeslami and A. Khodkar, *Trees whose 2-domination subdivision number is 2*, Opuscula Mathematica **32** (2012), 423–437.
111. E.J. Billington, N. Cavenagh and A. Khodkar, *Complete sets of metamorphoses: twofold 4-cycle systems into twofold 6-cycle systems*, Discrete Mathematics **312** (2012), 2438–2445.
112. H. Karami, A. Khodkar, and S.M. Sheikholeslami, *Signed edge majority total domination numbers in graphs*, Ars Combinatoria **105** (2012), 375–385.
113. H. Karami, A. Khodkar, S.M. Sheikholeslami and D.B. West, *Connected domination number of a graph and its complement*, Graphs and Combin. **28** (2012), 123–131.
114. A.N. Ghameshlou, A. Khodkar and S.M. Sheikholeslami, *On the signed bad numbers of graphs*, Bulletin of the Institute of Combinatorics and its Applications **67** (2013), 81–93.
115. H. Karami, R. Khoeilar, S.M. Sheikholeslami and A. Khodkar, *Global signed domination in graphs*, Bulletin of the Malaysian Mathematical Sciences **36** (2013), 363–372.
116. A. Khodkar, R. Saei and S.M. Sheikholeslami, *Signed edge k -subdomination numbers in graphs*, Ars Combinatoria **109** (2013), 129–141.
117. A. Khodkar, B.P. Mobaraky and S.M. Sheikholeslami, *Roman domination subdivision number of a graph and its complement*, Ars Combinatoria **111** (2013), 97–106.
118. N. Dehgardi, S.M. Sheikholeslami and A. Khodkar, *Bounding the rainbow domination number of a tree in terms of its annihilation number*, Transactions on Combinatorics **3** (2013), 21–32.
119. A. Khodkar, *The union of vertex disjoint 3-cycles is super edge-graceful*, Bulletin of the Institute of Combinatorics and its Applications, **69** (2013), 43–46

120. E. J. Billington, A. Khodkar, D. Petrusma and M. Sutton, *Lambda-fold theta graphs: metamorphosis into 6-cycles*, AKCE International Journal of Graphs Combinatorics **11** (2014), 81–94.
121. N. Dehgard, S.M. Sheikholeslami and A. Khodkar, Bounding the paired-domination number of a tree in terms of its annihilation number, *Filomat* **28** (2014), 523–529.
122. S.M. Hosseini Moghaddam, A. Khodkar and B. Samadi, *New bounds on the signed domination numbers of graphs*, Australasian Journal of Combinatorics **61** (2015), 273–280.
123. F. Demirkale, D. Donovan and A. Khodkar, *Direct constructions for general families of cyclic mutually nearly orthogonal Latin squares*, Journal of Combinatorial Designs **23** (2015), 195–203.
124. H. Abdollahzadeh Ahangar, V. Samodivkin, S.M. Sheikholeslami and A. Khodkar, *The restrained geodetic number of a graph*, Bulletin of the Malaysian Mathematical Sciences Society **38** (2015), 1143–1155.
125. A. Khodkar, B. Samadi and L. Volkmann, *On the signed (total) k -independence number in graphs*, *Discussiones Mathematicae Graph Theory* **35** (2015), 651–662.
126. F. Demirkale, D. Donovan, J. Hall, A. Khodkar and A. Rao, *Difference Covering Arrays and Pseudo-Orthogonal Latin Squares*, *Graphs and Combinatorics* **32** (2016), 1353–1374.
127. N. Dehgard, M. Falahat, S.M. Sheikholeslami and A. Khodkar, *On the rainbow domination subdivision numbers of graphs*, *Asian-European Journal of Mathematics* **9** (2016), 12pp.
128. A. Khodkar, A.L. Peterson, C.J. Wahl and Z.W. Walsh, *Uniquely bipancyclic graphs on more than 30 vertices*, *Journal of Combinatorial Mathematics and Combinatorial Computing* **98** (2016), 327–342.
129. B. Samadi, A. Khodkar and H.R. Golmohammadi, *$(k; k'; k'')$ -domination in graphs*, *Journal of Combinatorial Mathematics and Combinatorial Computing* **98** (2016), 343–349.
130. H. Aram, N. Dehgard and A. Khodkar, *The third ABC index of some graph operations*, *Bulletin of the Institute of Combinatorics and its Applications*, **78** (2016), 69–82.
131. M. Atapour and A. Khodkar, *Twin minus domination numbers in directed graphs*, *Communications in Combinatorics and Optimization*, Vol. 1 No. 2, (2016), 149–164.
132. A. Khodkar, C. Schulz and N. Wagner, *Existence of Some Signed Magic Arrays*, *Discrete Mathematics* **340** (2017), 906–926.
133. B. Samadi, H.R. Golmohammadi and A. Khodkar, *Bounds on several versions of restrained domination number*, *Contributions to Discrete Mathematics* **12** (2017), 14–19.
134. A. Khodkar and A.N. Ghameshlou, *Signed edge domination numbers of complete tripartite graphs: Part One*, *Utilitas Mathematica* **105** (2017), 237–258.

135. N. Dehgardi, M. Atapour and A. Khodkar, *Twin signed k -domination numbers in directed graphs*, Filomat **31:20** (2017), 6367–6378.
136. A. Clifton and A. Khodkar, *Super edge-graceful labelings of kites*, Journal of Combinatorial Mathematics and Combinatorial Computing **102** (2017), 277–295.
137. A. Khodkar, O. Sawin, L. Mueller and W. Choi, *(r) -Pancyclic, (r) -Bipancyclic and Oddly (r) -Bipancyclic Graphs*, Journal of Combinatorial Mathematics and Combinatorial Computing **102** (2017), 267–275.
138. A. Khodkar, *Signed edge domination numbers of complete tripartite graphs: Part 2*, Australasian Journal of Combinatorics **71** (2018), 351–368.
139. L. Asgharsharghi, A. Khodkar and S.M. Sheikholeslami, *On signed arc total domination in digraphs*, Opuscula Mathematica **38** (2018), 779–794.
140. D. A. Mojdeh, B. Samadi, A. Khodkar and H. R. Golmohammadi, *On the packing numbers in graphs*, Australasian Journal of Combinatorics **71** (2018), 468–475.
141. H. Aram, N. Dehgardi and A. Khodkar, *The second geometric-arithmetic index for trees and unicyclic graphs*, Iranian Journal of Mathematical Chemistry **9** (2018), 279–287.
142. A. Khodkar, D. Leach and B. Ellis, *Signed magic rectangles with three filled cells in each column*, Bulletin of the Institute of Combinatorics and its Applications, **90** (2020), 87–106.
143. A. Khodkar and D. Leach, *Magic rectangles with empty cells*, Utilitas Mathematica **116**(2020), 45–56
144. P. Jalilolghadr, A. P. Kazemi, A. Khodkar, *Total Dominator Coloring Of Circulant Graphs $C-N(A, B)$* , Utilitas Mathematica (2020), 105–117
145. A. Khodkar, D.A. Mojdeh, B. Samadi and I. G. Yero, *Covering Italian domination in graphs*, Discrete Applied Mathematics (2021), 324–331
146. A. Khodkar and D. Leach, *Magic Squares with empty cells*, Ars Combinatoria (2021), 45–52.
147. A. N. Ghameshlou, E. Vatandoost, A. Shaminezhad and A. Khodkar, *Signed Domination and Mycielski's Structure in Graphs*, RAIRO Operations Research (accepted 11/13/2019).
148. A. Khodkar and B. Ellis, *Signed magic rectangles with two filled cells in each column*, Journal of Combinatorial Mathematics and Combinatorial Computing, (2022), Vol 117, 1–23.
149. A. Khodkar and D. Leach, *Signed Magic Arrays with Certain Property*, 53rd SE Conference Proceedings, March 2022