

Sibel Özkan

Gebze Institute of Technology

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RESEARCH INTERESTS

- Graph Theory
- Design Theory

EDUCATION

- **Auburn University** Auburn, AL, USA
Ph.D., Mathematics May 2007
 - **Advisor:** Prof. Dr. Chris A. Rodger
 - **Dissertation:** "Hamilton decompositions with primitive complements"
 - **GPA:** 4.00
- **Bogazici University** Istanbul, Turkey
B.Sc., Mathematics Jan 2003
 - Graduation Project: "Cyclic Codes"

WORK EXPERIENCE

- **Gebze Institute of Technology** Gebze, KOCAELI
Associate Professor June 2013 - Present
Assistant Professor Sept. 2011 - June 2013
Courses Taught:
 - MATH 539 - Combinatorial Design Theory (Graduate Level)
 - MATH 538 - Graph Theory (Graduate Level)
 - MATH 442 - Matrix Theory
 - MATH 208 - Number Theory
 - MATH 115 - Discrete Mathematics
 - MATH 101 - Calculus I
- **Isik University** Sile, ISTANBUL
Part-time Instructor May 2011 - Aug. 2013
Courses Taught:
 - MATH 203 - Multivariable Calculus and Differential Equations
 - MATH 200 - Linear Algebra
 - MATH 103 - Mathematics I
 - MATH 101, 102 - Calculus I & II
- **Michigan Technological University** Houghton, MI
Visiting Assistant Professor Aug. 2008 - May 2011
Courses Taught:
 - MA 5221 - Graph Theory (Graduate Level)
 - MA 4209 - Graph Theory and Combinatorics
 - MA 2330 - Introduction to Linear Algebra
 - MA 1160, MA 2160 - Calculus with Technology I & II
- **Florida Atlantic University** Boca Raton, FL
Visiting Assistant Professor Aug. 2007 - May 2008
Courses Taught:
 - STA 4032 - Probability and Statistics for Engineers

- MAC 2253 - Calculus for Engineers I
- MAS 2103 - Matrix Theory

- **Johns Hopkins University Center for Talented Youth Program**
Cryptography Instructor

Dickinson College, PA
Summer 2007

- **Auburn University**
Graduate Teaching Assistant

Auburn, AL
Aug. 2007 - May 2008

Courses Taught:

- MATH 1680 - Business Calculus I
- MATH 1690 - Business Calculus II (Auditorium class with more than 100 students)
- MATH 1120 - Pre-Calculus Algebra
- MATH 1100 - Finite Mathematics

PUBLICATIONS

Papers in Academic Journals:

- J.L. Goldwasser, A.J.W. Hilton, D.G.Hoffman, S. Özkan, *Hall's Theorem and Extending Partial Latinized Rectangles*, accepted, Journal of Combinatorial Theory, Series A.
- M. Laffin, S. Özkan, *"Characterization of the (3,r)-regular graphs"*, accepted, Utilitas Mathematica.
- M.S. Keranen, S. Özkan, *"The Hamilton-Waterloo problem with 4-cycles and one factor of n-cycles"*, Graphs and Combinatorics, 29 (2013), Issue 6, 1827 - 1837.
- M.S. Keranen, D.L. Kreher, S. Özkan, *"Uniform two class regular Partial Steiner Triple systems"*, Journal of Combinatorial Designs, 20 (2012), Issue:3, 161 - 178.
- S. Özkan, *"Generalization of the Erdos-Gallai inequality"*, Ars Combinatoria, 98 (2011), 295 - 302.
- S. Özkan, C.A. Rodger, *"Hamilton decompositions of balanced complete multipartite graphs with primitive leaves"*, Discrete Math., 310 (2010), 1965 - 1973.
- S. Özkan, C.A. Rodger, *"Hamilton decompositions of graphs with primitive complements"*, Discrete Math. (Anthony Hilton special issue), 309 (2009), 4883 - 4888.

Popular Math Papers:

- S. Özkan, *"Latin kare inşa etmek" (Constructing Latin squares)*, Matematik Dünyası , 4 (2004), 17 - 21.
- S. Küçükkeçifçi, S. Özkan, *"Tasarımlar" (Designs)*, Matematik Dünyası, 4 (2004), 28 - 34.
- S. Özkan, *"Kodlar" (Codes)*, Matematik Dünyası, 4 (2004), 35 - 41.

Book Translations:

- Best Writing on Mathematics 2012, edited by Mircea Pitici, Princeton University Press, 2013. (Turkish version is published by Pandora Publishing, 2014)
- The Simpsons and Their Mathematical Secrets, Simon Singh, Bloomsbury Publishing, 2013. (Work in progress)

PROJECTS - HONORS - SCHOLARSHIPS

- **Project Leader in TUBITAK 1001 project.**
The Scientific and Technological Research Council of Turkey (TUBITAK)
 - **Project Number:** 113F033
 - **Project Name:** Cycle Decompositions in Graphs
 - **Project Start and End:** Sept 2013 - Sept 2015

GIT, KOCAELI
Sept 2013 - Present

- **Honor Society Member**
Phi Kappa Phi

May 2007 - Present

- **Outstanding Graduate Student** Auburn University, AL
Dept. of Mathematics and Statistics & ISO 2007
- **Outstanding Research Award Nomination** Auburn University, AL
College of Science and Engineering 2007
- **Full Tuition Graduate Teaching Assistant** Auburn University, AL
Dept of Mathematics and Statistics 2003 - 2007
- **Undergraduate Student Scholar** Bogazici University, ISTANBUL
Vehbi Koc Foundation 1998 - 2003
- **Ranked in the top 1 %** TURKEY
Nationwide University Entrance Exam 1997
- **Government Scholar** Edirne, TURKEY
Anatolian Teacher Training High School 1993 - 1996

VOLUNTEER WORK AND MEMBERSHIPS

- Serving as advisor in the Ph.D. dissertation committee of Uğur Odabaşı
Department of Mathematics, GYTE
- Serving as advisor in the Ph.D. dissertation committee of Yasemin Büyükçolak
Department of Mathematics, GYTE
- Serving as advisor in the MS thesis committee of Zehra Nur Özbay
Department of Mathematics, GYTE
- Served in the MS thesis committee of Aras Erzurumluoğlu
Graduate School of Science and Engineering, Koc University
Thesis Title: *"Intersection Problems for Steiner Triple Systems"*
- Served as co-advisor in the MS thesis committee of Melanie Laffin
Department of Mathematical Sciences, Michigan Tech
Thesis Title: *"(3,r)-regular graphs & Group divisible designs with mixed block sizes."*
- Served as co-advisor in the MS thesis committee of David Kamin
Department of Mathematical Sciences, Michigan Tech
Thesis Title: *"Infinite class of solutions to Hamilton-Waterloo Problem"*
- Served in the organization committee for the Combinatorics Workshop in Antalya Algebra Days XVI - May 9 - 13, 2014.
- Served in the organization committee for the 2nd Istanbul Design Theory, Graph Theory and Combinatorics Conference
Koc University, June 27, 2011 - July 01, 2011
- Served as a referee for Discrete Mathematics, Electronic Journal of Combinatorics, Ars Combinatoria, Turkish Journal of Mathematics, Turkic World Math. Soc. J. of App. and Eng. Math.
- Served as a reviewer for the 20th International Workshop on Combinatorial Algorithms
- Associate fellow of the Institute of Combinatorics and Its Applications
- Member of the American Mathematical Society
- Served for Auburn University Turkish Student Organization, with more than 50 members.
President: 2005 - 2006
Vice-President: 2004 - 2005

SELECTED PRESENTATIONS

Conferences:

- **The 18th Italian Combinatorics Conference (Combinatorics 2014)**
- Gaeta - ITALY
"On the Hamilton-Waterloo Problem with uniform cycle sizes"

June 2014

- Antalya Algebra Days - XVI**
- Antalya, TURKEY May 2014
"On the Hamilton-Waterloo Problem with uniform cycle sizes"
- The 4th Canadian Discrete and Algorithmic Math. Conference (CanaDAM)**
- Memorial University, St. Johns, CANADA June 2013
"On the Hamilton-Waterloo Problem with uniform cycle sizes"
- 24th Midwest Conference on Combinatorics, Cryptography, and Computing**
- Illinois State University, Normal, IL Sep 2010
"Hamilton-Waterloo Problem with 4-cycles and one factor of n-cycles"
- Combinatorics 2010**
- Verbania, ITALY June 2010
"Hamilton-Waterloo Problem with 4-cycles and one factor of n-cycles"
- Combinatorial Configurations and Their Applications**
- Michigan Tech, Houghton, MI Aug 2009
"Generalization of the Erdos-Gallai Inequality"
- 39th Int. Conference on Combinatorics, Graph Theory, and Computing**
- Florida Atlantic University, Boca Raton, FL March 2008
"Generalization of the Erdos-Gallai Inequality"
- 3rd Graduate Student Conference on Combinatorics**
- University of Washington, Seattle, WA April 2007
"Hamilton decompositions with primitive complements"
- 38th Int. Conference on Combinatorics, Graph Theory, and Computing**
- Florida Atlantic University, Boca Raton, FL March 2007
"Hamilton decompositions with primitive complements"
- 2nd Graduate Student Conference on Combinatorics**
- University of Wisconsin, Madison, WI April 2006
"Partial Hamilton decompositions of complete graphs with no 2-factor in the leave"
- 37th Int. Conference on Combinatorics, Graph Theory, and Computing**
- Florida Atlantic University, Boca Raton, FL March 2006
"Partial Hamilton decompositions of complete graphs with no 2-factor in the leave"
- Troy Mathfest**
- Troy University, AL March 2006
"Partial Hamilton decompositions of complete graphs with no 2-factor in the leave"
- 12th Int. Conf. on Statistics, Combinatorics, Maths, and App.s (SCMA)**
- Auburn University, AL Dec 2005
"Partial Hamilton decompositions of complete graphs with no 2-factor in the leave"

Organization Meetings:

- Invited Speaker at Women Mathematicians' Workshop**
- Gebze Institute of Technology - TURKEY May 2014
"On Graph Factorizations"
- Chapter of SIAM Meeting**
- Auburn University, AL March 2006
"The Math behind Sudoku"

Seminars:

- Invited Lecture**
- Istanbul Technical University, TURKEY Nov 2013
"On Graph Factorizations: Hamilton Cycle Decompositions and the Hamilton-Waterloo Problem"
- Combinatorics-Algebra-Number Theory (CAN) Seminar**
- Michigan Technological University, Houghton, MI Oct 2010
"Hamilton-Waterloo Problem with 4-cycles and one factor of n-cycles"
- Algebra/Cryptology Seminar**
- Florida Atlantic University, Boca Raton, FL Sep 2007
"Hamilton decompositions with primitive complements"

- NSF granted REU Seminar**

 - Auburn University, AL *July 2006*
"Hamilton decompositions with primitive complements"
- Combinatorics Seminar**

 - Koc University, Istanbul *June 2006*
"Hamilton decompositions with no 2-factor in the leave"
- Combinatorics Seminar**

 - Auburn University, AL *Nov 2005*
"Partial Hamilton decompositions with no 2-factors in the leave"
- NSF granted REU seminar**

 - Auburn University, AL *June 2005*
"Maximal sets of 2-factors"

CONFERENCES ATTENDED

- 2nd Istanbul Design Theory, Graph Theory and Combinatorics Conference**

 - Koc University, Istanbul *June 2011*
- 42nd Int. Conference on Combinatorics, Graph Theory, and Computing**

 - Florida Atlantic University, Boca Raton, FL *March 2011*
- 49th Midwest Graph Theory Conference**

 - University of Wisconsin, Superior, WI *Oct 2010*
- International Workshop on Graph Labelings**

 - University of Minnesota Duluth, MN *Oct 2010*
- 41st Int. Conference on Combinatorics, Graph Theory, and Computing**

 - Florida Atlantic University, Boca Raton, FL *March 2010*
- 23rd Midwest Conference on Combinatorics, Cryptography, and Computing**

 - Rochester Institute of Technology, Rochester, NY *Oct 2009*
- 22nd Cumberland Conference**

 - Western Kentucky University, Bowling Green, KY *May 2009*
- 47th Midwest Graph Theory Conference**

 - Illinois Institute of Technology, Chicago, IL *Nov 2008*
- 22nd Midwest Conference on Combinatorics, Cryptography, and Computing**

 - University of Nevada, Las Vegas, NV *Oct 2008*
- New directions in Algorithms, Combinatorics, and Optimization**

 - Georgia Tech, Atlanta, GA *May 2008*
- 20th Cumberland Conference**

 - Emory University, Atlanta, GA *May 2007*
- Excill: Conference on Extremal Combinatorics**

 - University of Illinois, Urbana-Champaign, IL *Nov 2006*
- 36th Int. Conference on Combinatorics, Graph Theory, and Computing**

 - Florida Atlantic University, Boca Raton, FL *March 2005*
- Paul Erdos Memorial Lecture Series**

 - University of Memphis, TN *March 2004*

COMPUTER SKILLS

Operating Systems: Microsoft Windows, Apple MAC OS X, Linux;

Software: Maple, Magma, MatLab, Microsoft Office applications, TeX/LaTeX

REFERENCES

- Available Upon Request