Lale Özkahya

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http://ozkahya.github.io

POSITIONS		
	Dept. of Computer Engineering at Hacettepe University	
	Associate Professor	2014–
	Dept. of Mathematics at Hacettepe University	
	Expert	2012-2014
	Dept. of Mathematics at Işık University	
	Postdoctoral researcher, Supervisor: Türker Bıyıkoğlu	Jan.-May 2012
	Dept. of Mathematics at Iowa State University	
	Postdoctoral researcher, Supervisor: Maria Axenovich	Aug. 2011- May 2012
	Institute of Pure and Applied Mathematics (IPAM)	
	Combinatorics: Methods and App. in Math. and Comp. Sci. Program	
	Long-term sponsored fellow	Sep.-Dec. 2009
	Dept. of Mathematics at University of Illinois	
	Graduate researcher	2004 - 2009
	Dept. of Aerospace engineering at University of Illinois	
	Graduate researcher	2001 - 2003

EDUCATION		
	Ph.D. Mathematics, University of Illinois, Advisor: Zoltán Füredi	2010
	M.S. Aerospace engineering, (Computational Science and Engineering Program), University of Illinois, Advisor: Philippe Geubelle	2003
	B.S. Mechanical engineering, Boğaziçi (Bosphorus) University	1999

RESEARCH INTERESTS	
	Social network analysis, extremal graph theory

AWARDS& HONORS		
	Science Academy Young Scientist Award (BAGEP, Mathematics)	2018
	Invited Participant at Geometric and Enumerative Combinatorics at IMA	2014
	Invited Participant at Hypergraph Turan problem Workshop at AIM	2011

JOURNALS

[1] L. Özkahya, Y. Person: "Minimum Rainbow H-decompositions of graphs", *European Journal of Combinatorics* **71** (2018), 111-124.

[2] Z. Füredi, L. Özkahya: "On 3-uniform hypergraphs without a cycle of a given length", *Discrete Applied Mathematics* **216** (3) (2017), 582–588.

[3] L. Özkahya, B. Stanton: "On a covering problem in the hypercube", *Graphs and Combinatorics* **31**(1) (2015), 235–242.

[4] L. Özkahya, M. Young: "Anti-Ramsey number of matchings in hypergraphs", *Discrete Mathematics* **313**(20) (2013), 2359–2364 .

[5] M. Axenovich, L. Özkahya: "On homometric sets in graphs", *Australas. J. Combin.* **55** (2013), 175–187.

[6] Z. L. Nagy, L. Özkahya, B. Patkós, M. Vizer: "On the ratio of maximum and minimum degree in maximal intersecting families", *Discrete Mathematics* **313** (2013), 207–211.

[7] L. Özkahya, Y. Person: "Minimum H-decompositions of graphs: edge-critical case", *Journal of Combinatorial Theory, Series B*, **102** (2012), 715–725.

[8] Z. Füredi, L. Özkahya: "Unavoidable subhypergraphs: a-clusters", *Journal of Combinatorial Theory, Series A* **118** (2011), 2246–2256.

[9] Z. Füredi, L. Özkahya: "On even-cycle-free subgraphs of the hypercube", *Journal of Combinatorial Theory, Series A* **118** (2011), 1816–1819.

[10] J. Choi, L. Özkahya, D. West: "Degree-splittability of caterpillars and regular multigraphs", *Congressus Numerantium* **202** (2010), 137–148.

[11] A. Kostochka, L. Özkahya and D. Woodall: "A Brooks-type bound for squares of K_4-minor-free graphs", *Discrete Mathematics* **309** (2009), 6572–6584.

[12] Z. Füredi, L. Özkahya: "On 14-cycle-free subgraphs of the hypercube", *Combinatorics, Probability and Computing* **18** (2009), 725–729.

CONFERENCE PUBLICATIONS

[13] Ali Baran Taşdemir, Lale Özkahya. Learning Heuristics for the Maximum Clique Enumeration Problem Using Higher-Order Graph Structures. Signal Processing and Communications Applications Conference (**SIU2021**), 4 pages, June 2021.

[14] Ali Baran Taşdemir, Barkın Atasay, Lale Özkahya. Classification of Complex Networks Using Structural Analysis of Random Graph Models. Signal Processing and Communications Applications Conference (**SIU2020**), 4 pages, October 2020.

[15] Taha Sevim, Muhammet Selçuk Güvel, Lale Özkahya. A Fast Counting Method for 6-Motifs with Low Connectivity Mathematical Aspects of Computer and Information Sciences (**MACIS 2019**), 8 pages, November 2019.

TEACHING EXPERIENCE

Undergraduate Teaching

• BBM205 Discrete Mathematics	2015-2021
• BBM 301 Programming Languages	2021
• BBM462 Social and Economic Networks	2022
• BBM402 Theory of Computation	2018-2020
• BBM 401 Automata Theory and Formal Languages	2016, 2017
• BBM403 Combinatorics and Graph Theory	2015, 2019

Graduate Teaching

• CMP741 Advanced Analysis of Algorithms	2021
• CMP694 Graph Theory	2015-2020

STUDENTS MENTORED

M.S. Students

- Ali Baran Taşdemir (2020-2022)
- Alaittin Kırtışoğlu (currently at Illinois Institute of Technology)

PROJECTS

TUBITAK-1002, Maksimum Klik Probleminin Çözümü için Yüksek Dereceli Çizge Motiflerinin Katkısıyla Nokta Sınıflandırılması.
Principal Investigator   Feb-Nov 2021

TUBITAK-1001, 'TARIF : Kendin yap videolarının eşleştirilmesi ve zenginleştirilmesi için çok-kipli yaklaşım'.
Researcher   2019-2022

TUBITAK and European Science Foundation (EUROCORES Programme EUROGIGA),
'Geometric representations and symmetries of graphs, maps and other discrete structures and applications in science' (GReGAS).
Researcher   Jan-May 2012

INVITED TALKS

IMBM Discrete Math Days, Boğaziçi University	2019
Institute of Mathematics at Goethe University	2018
Dept. of Mathematics at Koç University	2017
Gwangju Institute of Science and Technology	2015
Workshop on Graph Theory and its Applications III at IMBM.	2012
National Mathematics Symposium at Nigde University	2012
Special Session on Graphs and Hypergraphs at AMS Fall Central Section Meeting	2010
Conference in honor of Laci Babai's 60th birthday Combinatorics, Groups, Algorithms, and Complexity	2010

EXTERNAL SERVICE

Journal Reviewer

Australasian J. of Combin.	2016
Cent. Eur. J. of Math.	2013
Combin. Probab. Comput.	2014
Discrete Applied Math.	2015
Discrete Math.	2011-2018
Discuss. Math. Graph Theory	2011, 2016
Electronic J. of Combin.	2019
Graphs and Combin.	2011, 2014
Hacettepe J. of Math. and Stat.	2013, 2014
J. Graph Theory	2012, 2014, 2020
J. of Combin. Optim.	2016
Turkish J. of Elec. Eng. Comp. Sci.	2014, 2019, 2021
Turkish J. of Math.	2012, 2013, 2015, 2018
IEEE Transactions on Industrial Informatics	2017
J. Combin. Theo. Ser. A.	2017

Leading Roles

Co-organizer of *Special Session on Graph Theory* at AMS Central Section Meeting.
Iowa City.   2011