

Leyla Işık, Ph.D.

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Address: Tuzla, İstanbul
Date of birth: 14.02.1985
Date of place: İzmir
Marital status: Married

Professional Experiences

- 2016 – 2017 ■ **Postdoctoral researcher in Mathematics department**, Salzburg University, Salzburg, Austria. Financed by Austrian FWF project with the title "Arithmetic Primitives for Uniform Distribution Modulo 1". Project leader : Prof. Dr. Peter Hellekalek.
- 2015 – 2016 ■ **Postdoctoral researcher in Mathematics department**, Sabancı University, Istanbul, Turkey. Financed by Tübitak project with the title "Sonlu cisimler üzerinde tanımlı Polinomlar, Teori ve Uygulamalar II". Project leader : Prof. Dr. Henning Stichtenoth.

Education

- 2011 – 2015 ■ **Ph.D. Mathematics**, Sabancı University, İstanbul.
Thesis title: *On Complete Mapping and Value Sets of Polynomials over Finite Fields*.
- 2008 – 2011 ■ **M.Sc. Mathematics**, Sabancı University, İstanbul.
Thesis title: *On the Minimum Distance of Cyclic Codes*.
- 2003 – 2008 ■ **B.Sc. Mathematics**, Dokuz Eylül University, İzmir.

Research Publications

- On the Index of the Diffie-Hellman Mapping, "Applicable Algebra in Engineering Communication and Computing", 2020 (with A. Winterhof) (to appear) <https://arxiv.org/pdf/2011.04245.pdf>
- Maximum-order Complexity and Correlation Measures, published in "Cryptography", 2017 (with A. Winterhof) <http://www.mdpi.com/2410-387X/1/1/7>
- Index and Carlitz rank of Permutation Polynomials, published in "Finite Fields and Their Applications", 2017 (with A. Winterhof) <https://www.sciencedirect.com/science/article/pii/S1071579717301065>
- Complete Mappings and Carlitz Rank, published in "Design Codes and Cryptography", 2016 (with A. Topuzoğlu, A. Winterhof) <http://link.springer.com/article/10.1007/s10623-016-0293-5>
- A Note on Value Sets of Polynomials over Finite Fields (with A. Topuzoğlu) (submitted). <https://arxiv.org/pdf/1701.06158.pdf>

Invited Talks

- Canterbury University, New Zealand ■ Maximum Order Complexity and Correlation Measures, September 30, 2019.
- VUB, Brussels, Belgium ■ On the Index of Permutation Polynomials, January 17, 2017.

Invited Talks (continued)

Mimar Sinan Fine Arts University, Turkey	Index and Carlitz rank of Permutation Polynomials, December 1, 2016.
Gebze Technical University, Turkey	Index and Carlitz rank of Permutation Polynomials, November 4, 2016.
University of Salzburg, Austria	A note on Value Sets of Polynomials over Finite Fields, April 26, 2016.
The University of Naples Federico II, Italy	On Complete Maps and Value Sets of Polynomials over Finite Fields, March 18, 2016.
University of Zurich, Switzerland	On Complete Maps and Value Sets of Polynomials over Finite Fields, December 16, 2015.

International Conference Talks

12 th \mathbb{F}_q Conference, New York, USA	On Complete Mappings of Finite Fields, July 13-17, 2015.
4 th Irsee Conference, Germany	On Complete Mappings of Finite Fields, September 14-20, 2014.
XVI. Antalya Algebra Days, Antalya, Turkey	On the Minimum Distance of Cyclic Codes, 09-13 May, 2014.

Teaching Experience

2020-2021, Fall	İstinye University , Differential Equations, Lecturer
2019-2020, Spring	İstinye University , Linear Algebra with Applications, Computer Algebra Programming with Sage, Lecturer
2019-2020, Fall	İstinye University , Differential and Integral Calculus, Lecturer
2018-2019, Summer	Sabancı University , Linear Algebra, Lecturer
2018-2019, Spring	Bilgi University , Introduction to Probability, Lecturer
2018-2019, Fall	Piri University , Linear Algebra, Lecturer
2017-2018, Summer	Şehir University , Calculus 1, Lecturer
	Sabancı University , Linear Algebra, Lecturer
2017-2018, Spring	Piri Reis University , Basic Mathematics II, Probability and Statistics, Lecturer
2017-2018, Fall	Okan University , Applied Mathematics, Calculus, Lecturer
2008-2015	Sabancı University , Calculus I-II, Linear Algebra, Discrete Mathematics, Differential Equations, Number Theory, Introduction to Algebra, Teaching Assistant.


Skills


Coding Python, Sage, Magma, Matlab, Mathematica, \LaTeX , Word, Excel ...


Skills (continued)

Languages  English - advanced, Italian - intermediate, German - intermediate.

Scholarships

2006-2007  Ahmet Pıřtina Scholarship.

2008-2011  Sabancı University, M.Sc in Mathematics, full scholarship.

2011-2015  Sabancı University, PhD in Mathematics, full scholarship.


Part-Time Work Experiences


2004 – 2005, Summer  **Manager**, Lost Children Center, İZFAŞ, İzmir,


2005, August  **Interpreter**, Universiade, Izmir.


2008 – 2015  **Teaching Assistant**, Sabancı University, İstanbul.

References

Prof. Dr. Arne Winterhof  Johann Radon Institute for Computational and Applied Mathematics Austrian Academy of Sciences, Altenbergerstr. 69, 4040 Linz, Austria.
arne.winterhof@ricam.oeaw.ac.at

Prof. Dr. Peter Hellekalek  Mathematics Department, Salzburg University, Hellbrunner Str. 34, 5020 Salzburg, Austria.
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Prof. Dr. Alev Topuzoğlu  Sabancı University, Faculty of Engineering and Natural Sciences, Tuzla, 34956 Istanbul, Turkey.
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Prof. Dr. Cem Güneri  Sabancı University, Faculty of Engineering and Natural Sciences, Tuzla, 34956 Istanbul, Turkey.
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