

Oğuzhan Yürük

Curriculum Vitae

23/06/1993, Bursa - TURKEY
Institut für Analysis und Algebra
AG Algebra, TU Braunschweig
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Education

- 2017–2021 **PhD Student in Mathematics**, *TU Berlin - TU Braunschweig*, Researcher in Emmy Noether Junior Research Group.
Advisor : Timo de Wolff
- 2015–2017 **Master of Science in Mathematics**, *Central European University*, Budapest.
First of the class with GPA: 3.79
- Jan–Jun 2014 **Erasmus Exchange**, *Stockholm University*, Stockholm.
- 2011–2015 **Bachelor of Science in Mathematics**, *Bilkent University*, Ankara.
First of the class with GPA: 3.77

Masters Thesis

- Title *A geometric relation between the roots and critical points of finite Blaschke products: Gauss-Lucas' theorem in hyperbolic geometry*
- Supervisor Professor Róbert Szöke

Awards-Grants

- 2019 SIAM Student Travel Award for SIAM AG19
- 2017 CEU Outstanding Academic Achievement Award
- 2015–2017 CEU Master's Excellence Scholarship
- 2014 Orhan Alisbah Award for Academic Excellency from Bilkent University Mathematics Department
- 2014 Erasmus Exchange Grant
- 2013 Vehbi Koç Foundation Full Grant for Undergraduate Studies
- 2011–2015 Full Tuition Scholarship from Bilkent University

Publications

Research Articles

- Initial Steps in the Classification of Maximal Mediated Sets**
with J. Hartzer, O. Röhrig, T. de Wolff, *Journal of Symbolic Computation* (special issue for "MEGA2019"), published electronically on July 08, 2020; doi: 10.1016/j.jsc.2020.07.013; , [ArXiv 1910.00502](https://arxiv.org/abs/1910.00502)
- The Kinetic Space of Multistationarity in Dual Phosphorylation**
with E. Feliu, N. Kaihnsa, T. de Wolff, *Journal of Dynamics and Differential Equations*, published electronically on Sep. 04, 2020; doi: 0.1007/s10884-020-09889-6; , [ArXiv 2001.08285](https://arxiv.org/abs/2001.08285)

Organizational-Management Skills

- July 2020 **Local organizer of ICMS 2020**, TU BRAUNSCHWEIG, Braunschweig, Germany, due to Covid-19 the conference was held online.
- June 2020 - Present **Coordinator in the Youtube channel "Matematigin Pesinde(In the Pursuit of Mathematics)"**.
- June 2019 **Co-organizer of Workshop on Applied Algebra**, TU BRAUNSCHWEIG, Braunschweig, Germany.
- 2012–2015 **Vice-President and the Founding Member of Student Club, Bilkent Mathematical Society**, BILKENT UNIVERSITY, Ankara, Turkey.

Computer skills

- Programming Languages PYTHON, MatLab, Julia
- Other Useful Softwares \LaTeX , Git, Polymake, Singular

Talks & Presentations

- September 2020 **DMV Jahrestagung 2020 - Minisymposia on Theory and Applications of Mixed-Integer and Polynomial Optimization**, TU CHEMNITZ, due to Covid-19 it was held online.
Title: *A SONC Approach to Understand the Parameter Regions of Multistationarity*
- September 2020 **TU Braunschweig Algebra Master-Seminar**, TU BRAUNSCHWEIG, due to Covid-19 it was held online.
Title: *Initial Steps in the Classification of Maximal Mediated Sets*
- July 2020 **ICMS 2020**, TU BRAUNSCHWEIG, due to Covid-19 it was held online.
Title: *Initial Steps in the Classification of Maximal Mediated Sets*
- June 2020 **Matematigin Pesinde(In the Pursuit of Mathematics)**, YOUTUBE.
Title: *AM-GM Inequality and Nonnegative Polynomials*
- March 2020 **DMG Seminar TU Berlin**, TU BERLIN, Berlin, Germany.
Title: *A SONC Approach to Understand the Parameter Regions of Multistationarity*
- January 2020 **Oberseminar Applied Algebra and Analysis**, TU BRAUNSCHWEIG, Braunschweig, Germany.
Title: *Understanding the parameter regions of multistationarity indual phosporylation cycle via SONC*
- December 2019 **Einstein Workshop on Polytopes and Algebraic Geometry**, FU BERLIN, Berlin, Germany.
Contributed Talk - *Understanding the parameter regions of multistationarity indual phosporylation cycle via SONC*
- October 2019 **Opening Conference for Thematic Einstein Semester on Algebraic Geometry**, FU BERLIN, Berlin, Germany.
Poster Presentation - *Identifying the Parameter Regions of Multistationarity via SONC*
- August 2019 **ICCOPT 2019**, TU BERLIN, Berlin, Germany.
Talk in Minisymposia on Polynomial Optimization - *A SONC Approach to Understand the Parameter Regions of Multistationarity*

- July 2019 **SIAM AG19**, UNIVERSITÄT BERN, Bern, Switzerland.
Talk in Minisymposia on sparsity in polynomial systems and applications - *Initial Steps in the Classification of Maximal Mediated Sets*
- June 2019 **MEGA 2019**, UNIVERSIDAD COMPLUTENSE DE MADRID, Madrid, Spain.
Poster Presentation - *Initial Steps in the Classification of Maximal Mediated Sets*
- June 2019 **Workshop on Applied Algebra**, TU BRAUNSCHWEIG, Braunschweig, Germany.
Poster Presentation - *Initial Steps in the Classification of Maximal Mediated Sets*
- February 2019 **7th BMS Student Conference**, TU BERLIN, Berlin, Germany.
Contributed Talk - *An Experimental Classification of Maximal Mediated Sets*
- September 2018 **SFB TRR 195 Annual Meeting**, TÄJJBINGEN EBERHARD KARLS UNIVERSITY, TÄjbingen, Germany.
Snapshot Talk - *An Experimental Classification of Maximal Mediated Sets*
- September 2018 **Turkish Mathematical Society Summer Schools for Graduate and Undergraduate Students**, NESIN MATHEMATICS VILLAGE, Izmir, Turkey.
Short Lecture - *Introduction to Convex Optimization*
- June 2018 **Summer School on Numerical Computing in Algebraic Geometry**, MPI MIS, Leipzig, Germany.
Poster Presentation - *An Experimental Classification of Maximal Mediated Sets*
- May 2018 **IB Days 2018**, TED BURSA COLLEGE, Bursa, Turkey.
Outreach Talk - *Questioning the Questioning*
- July 2015 **Turkish Mathemtical Society Summer School 2015**, NESIN MATHEMATICS VILLAGE, İzmir, Turkey.
Public talk - *Classification of Riemann Surfaces with Riemann-Roch Theorem*
- May 2015 **Senior project defense**, BILKENT UNIVSERSITY, Ankara, Turkey.
Calculating the Picard Number of Fermat Quartic Surface, supervised by Prof. Ali Sinan Sertöz
- December 2014 **Senior project defense**, BILKENT UNIVSERSITY, Ankara, Turkey.
Riemann-Roch Theorem and Its Applications, supervised by Prof. Ali Sinan Sertöz

Activities & Past Events

- October 2019 **EWM German Chapter Conference**, MPI MIS, Leipzig, Germany.
- October 2019 **Opening Conference for Thematic Einstein Semester**, FU BERLIN, Berlin, Germany.
- September 2019 **Complexity of Numerical Computation**, BERLIN-BRANDENBURG ACADEMY OF SCIENCES AND HUMANITIES, Berlin, Germany.
- September 2019 **Convexity Day**, MPI MIS, Leipzig, Germany.
- August 2019 **ICCOPT 2019**, TU BERLIN, Berlin, Germany.
- July 2019 **SIAM AG19**, UNIVERSITÄT BERN, Bern, Switzerland.
- July 2019 **Trieste Algebraic Geometry Summer School - Algebraic Geometry Towards Applications**, ICTP TRIESTE, Trieste, Italy.
- June 2019 **MEGA 2019**, UNIVERSIDAD COMPLUTENSE DE MADRID, Spain, Germany.
- June 2019 **TES International Conference on Network Games, Tropical Geometry, and Quantum Communication**, ZUSE INSTITUTE BERLIN, Berlin, Germany.
- June 2019 **Workshop on Applied Algebra**, TU BRAUNSCHWEIG, Braunschweig, Germany.

- March 2019 **Spring School and Workshop on Polytopes**, RUHR-UNIVERSITÄT BOCHUM, Bochum, Germany.
- February 2019 **7th BMS Student Conference**, TU BERLIN, Berlin, Germany.
- October 2018 **Einstein Workshop Geometric and Topological Combinatorics**, FU BERLIN, Berlin, Germany.
- September 2018 **SFB TRR 195 Annual Meeting**, TÄIJBINGEN EBERHARD KARLS UNIVERSITY, TÄijbingen, Germany.
- August 2018 **Summer School on Numerical Computing in Algebraic Geometry**, MPI MIS, Leipzig, Germany.
- June 2018 **Summer School on Hyperbolic Polynomials, Sums of Squares and Optimization**, GEORGIA INSTITUTE OF TECHNOLOGY, Atlanta, GA, USA.
- June 2018 **A Frankfurt-Darmstadt Afternoon on Optimization**, GOETHE UNIVERSITY, Frankfurt am Main, Germany.
- May 2018 **Introduction Course to Algebraic Statistics**, FU BERLIN, Berlin, Germany.
- May 2018 **Combinatorics Day**, MPI MIS, Leipzig, Germany.
- March 2018 **Einstein Workshop on Discrete Geometry and Topology**, FU BERLIN, Berlin, Germany.
- February 2018 **Optimization Day**, MPI MIS, Leipzig, Germany.
- December 2017 **Berlin-Leipzig Seminars on Algebra, Geometry and Combinatorics**, TU BERLIN, Berlin, Germany.
- December 2017 **Open Source Computer Algebra Research**, MPI MIS, Leipzig, Germany.
- December 2017 **Geometrietag**, OTTO VON GUERICKE UNIVERSITY , Magdeburg, Germany.
- November 2017 **Berlin-Leipzig Seminars on Algebra, Geometry and Combinatorics**, FU BERLIN, Berlin, Germany.
- May 2017 **Antalya Algebra Days XIX**, NESIN MATHEMATICS VILLAGE, İzmir, Turkey.
- July 2016 **Turkish Mathematical Society Analysis Summer School**, BOGAZICI UNIVERSITY, İstanbul, Turkey.
- 2008–Present **Nesin Mathematics Village and Turkish Mathematical Society Summer Schools for Graduate and Undergraduate Students**, NESIN MATHEMATICS VILLAGE, İzmir, Turkey.

Vocational Experience

- 2014–2015 **Grading Assistant**, BILKENT UNIVERSITY, Ankara.
Worked as a homework and quiz grader of the course MATH 124- Abstract Mathematics II
- 2013–2014 **Grading Assistant**, BILKENT UNIVERSITY, Ankara.
Worked as a homework and quiz grader of the course MATH 123- Abstract Mathematics I
- 2013–2014 **Grading Assistant**, BILKENT UNIVERSITY, Ankara.
Worked as a homework and quiz grader of the course PHYS 102- Physics II
- 2012–2013 **Grading Assistant**, BILKENT UNIVERSITY, Ankara.
Worked as a homework and quiz grader of the course PHYS 101- Physics I