TÜRKÜ ÖZLÜM ÇELİK

Max-Planck - Institut für
Mathematik in den Naturwissenschaften
Inselstraße 22, 04103

turkuozlum@gmail.com
turkuozlum.wixsite.com/tocj
+493419959
Office F306

AFFILIATION

Leipzig University, November 2019 – present
Research Fellow (Wissenschaftliche Mitarbeiter)
Host: Silvia Schöneburg

Max-Planck-Institute for Mathematics in the Sciences (MPI MIS), November 2019 – present
Guest Researcher
Host: Bernd Sturmfels

FORMER AFFILIATION

Max-Planck-Institute for Mathematics in the Sciences (MPI MIS), May 2018 – October 2019
Postdoctoral Researcher
Host: Bernd Sturmfels

Institut de recherche mathématique de Rennes (IRMAR), January 2015 – April 2018
Doctoral Researcher funded by Henri Lebesgue Centre
Host: Sylvain Duquesne, Christophe Ritzenthaler
Project: HAH - Hardware and Arithmetic for Hyperelliptic Curves Cryptography

EDUCATION

Ph.D. in Mathematics, *August 2018*
University of Rennes 1, Rennes, France
Title : Propriétés géométriques et arithmétiques éxplicites des courbes
Advisors: Christophe Ritzenthaler, Sylvain Duquesne

M.Sc. in Mathematics, *December 2014*
Sabancı University, İstanbul, Turkey
Title : A Drinfeld modular interpretation of an asymptotically
optimal tower of curves over finite fields
Advisors: Alp Bassa, Cem Güneri

B.Sc. in Mathematics, *2012*
İstanbul Bilgi University, İstanbul, Turkey

PUBLICATIONS AND PREPRINTS

- **Optimal Transport to a Variety** *with Asgar Jamneshan, Guido Montúfar, Bernd Sturmfels, Lorenzo Venturello;* accepted, Mathematical Aspects of Computer and Information Sciences, MACIS 2019

- **On the Eigenpoints of Cubic Surfaces** *with Francesco Galuppi, Avinash Kulkarni, Miruna Stefana Sorea;* to appear in Le Matematiche

- **Tritangents and Their Space Sextics** *with Avinash Kulkarni, Yue Ren, Mahsa Sayyary Namin; 2018,* Journal of Algebra **538** (2019), 290-311

- **A Thomae-like Formula: Algebraic Computations of Theta Constants** to appear in International Mathematics Research Notices

- **A Non-Ordinary Curves with a Prym Variety of Low p-rank** *with Yara Elias, Burçin Güneş, Rachel Newton, Ekin Ozman, Rachel Pries, Lara Thomas; Women in Numbers Europe II* **11** *(2018) 117-158*

- **Architecture Level Optimizations for Kummer based HECC on FPGAs** *with Gabriel Gallin, Arnaud Tisserand; Progress in Cryptology – INDOCRYPT 2017 (2017) 44-64*

CODE

- **SageMath** - *Code for arithmetic on Kummer surfaces*

- **Magma** - *Code on computations of Thetanullwerte*
        - *Code for reconstruction of space sextics from their tritangents*

- **Macaluay2** - *Code on eigenpoints of cubic surfaces*

POPULARIZATION OF MATHEMATICS

- *A book project based on mathematical models which are stored in Leipzig University from Felix Klein's time as a member of a team led by Silvia Schöneburg.*

ORGANIZATIONAL SERVICES

- *Program Committee Member*
- **Mathematical Aspects of Computer and Information Sciences 2019**, *Istanbul/Turkey, 13-15 November 2019*

- *Organizer, with Daniele Agostini, Christian Klein & Emre Sertöz*
- **Mini-Symposium on Riemann Surfaces in the SIAM Conference**, *Bern/Switzerland, 9-13 July 2019*

- *Organizer, with Francesca Arici & Xianqing Li-Jost*
- **Round Table Meeting: Women in Mathematics at MPI MiS**, *Leipzig/Germany, November 2018 – March 2019*

- *Organizer*
- **Seminar on Nonlinear Algebra**, *Leipzig/Germany, June 2018 – December 2018*

- *Local Organizer*
- **Géométrie Algébrique en Liberté XXIV**, *İzmir/Turkey, June 2016*

TALKS

- **Nonlinear Algebra**
- *Antalya Algebra Days, May 2020*

- **Algebraic Computations of Theta Constants**
- *Workshop Women in Algebra and Symbolic Computations, December 2019*

- **Optimal Transport to a Variety**,
- *Stochastik Seminar, Leipzig University, December 2019*

- **Algebraic Computations of Theta Constants**
- *IMBM, Boğaziçi University, November 2019*

- **Optimal Transport to a Variety**

-Mathematical Aspects of Computer and Information Sciences, Gebze Technical University, November 2019

- **A Thomae-like Formula**

-Oberseminar Algebra/Geometrie, University of Oldenburg, June 2019

- **Varieties**

-Invitation to Nonlinear Algebra, Max Planck Institute for Mathematics in the Sciences, June 2019

- **Algebraic Computations of Theta Constants**

-Charlotte's Web Research Talk, University of Southern California, April 2019

- **On p-adic Uniformization of Elliptic Curves**

-preparatory event for Chow lectures, Max Planck Institute for Mathematics in the Sciences, October 2018

- **Computations of Thetanullwerte**

-Seminar on Nonlinear Algebra, Max Planck Institute for Mathematics in the Sciences, May 2018

- **Arithmetic via Hyperelliptic Curves**

-Graduate Student Seminar, University of Basel, November 2016

- **Weber's Formula**

- Arithmetic properties of curves of small genus (Series of lectues), Barcelona Graduate School of Mathematics, April 2017

- **An Approach towards Weber's Formula**

-Séminaire de géométrie et algébre effectives, University of Rennes 1 - IRMAR, May 2016

- **Some Model Theory as a Tool: Proof of Ax-Grothendieck Theorem**

-Pampers" des jeunes chercheurs en géométrie, University of Rennes 1 - IRMAR, January 2016

- **A Drinfeld modular interpretation**

-"Pampers" des jeunes chercheurs en géométrie, University of Rennes 1 - IRMAR, April 2015

TEACHING EXPERIENCE - high school - undergraduate- gradute

Calculus - *Teaching Assistant - Sabancı University*

Discrete Mathematics - *Teaching Assistant - Sabancı University*

Linear Algebra - *Teaching Assistant - Sabancı University*

Field Theory and Galois Theory - *Teaching Assistant - İstanbul Bilgi University*

Complex Analysis - *Teaching Assistant - İstanbul Bilgi University*

Group Theory - *Lecturer - Nesin Mathematics Village*[1]

Graph Theory - *Lecturer - Nesin Mathematics Village*

Number Theory - *Lecturer - Nesin Mathematics Village*

Combinatorics - *Lecturer - Nesin Mathematics Village*

Real Analysis in one variable/ several variables - *Lecturer - Nesin Mathematics Village*

Point Set Topology - *Lecturer - Nesin Mathematics Village*

Elementary Number Theory - *Lecturer - Nesin Mathematics Village*

C_i **Fields** - *Lecturer - Nesin Mathematics Village*

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[1]The programs of all the acitivies in Nesin Mathematics village can be found at `https://nesinkoyleri.org/tum-etkinlikler/`

Introduction to Drinfeld Modules - *Lecturer - Nesin Mathematics Village*

Uniform Cell Decomposition of p-adic Numbers - *Lecturer - Nesin Mathematics Village*

Linear Algebra - *Lecturer - Nesin Mathematics Village*

Calculus - *Lecturer - Nesin Mathematics Village*

TEACHING AWARD

University Courses Teaching Assistant Incentive Award - *Sabancı University*

LANGUAGE

- **Turkish** - *Native language*

- **English** - *Fluent*

- **French** - *Intermediate $\sim$ B2*

- **German** - *Basic $\sim$ A2*