

CURRICULUM VITAE

EMRE CAN SERTÖZ

PROFESSIONAL EXPERIENCE

Postdoctoral Researcher, 01/05/2017 — present

Employer: Max Planck Institute for Mathematics in the Sciences, Leipzig

Mentors: Bernd Sturmfels, Mateusz Michałek

EDUCATION

Ph.D. in Mathematics, Humboldt-Universität zu Berlin, Germany, 06/11/2013 — 25/09/2017

Title: Enumerative geometry of double spin curves

Advisor: Gavril Farkas

Co-advisor: Gerard van der Geer

M.Sc. in Mathematics, Humboldt-Universität zu Berlin, Germany, 01/10/2011 — 05/11/2013

Title: Hurwitz numbers

Advisor: Gavril Farkas

B.Sc. in Mathematics, Bilkent University, Turkey, 01/09/2007 — 16/06/2011

Title: Fubini–Study Metric and the Fermat Quintic

Advisor: Sema Salur

PUBLICATIONS

1. *An octanomial model for cubic surfaces*, with M. Panizzut, B. Sturmfels. arXiv:1908.06106.
2. *On reconstructing subvarieties from their periods*, with H. Movasati. arXiv:1908.03221.
3. *A numerical transcendental method in algebraic geometry*, with P. Lairez, SIAM Journal on Applied Algebra and Geometry, 3 (4), 559–584, 2019. arXiv:1811.10634.
4. *Prym varieties of genus four curves*, with N. Bruin, Transactions of the American Mathematical Society, in press. arXiv:1808.07881.
5. *Certifying reality of projections*, with J. Hauenstein, A. Kulkarni, S. Sherman, Lecture Notes in Computer Science, 10931, 200–208, 2018. arXiv:1804.02707.
6. *Computing periods of hypersurfaces*, Mathematics of Computation 88 (320), 2987–3022, 2019. arXiv:1803.08068.
7. *Computing images of polynomial maps*, with C. Harris and M. Michalek, Advances in Computational Mathematics, in press. arXiv:1801.00827.
8. *Enumerative geometry of double spin curves*. PhD Thesis. Published electronically by HU library, 2017.
9. *A compactification of the moduli space of multiple-spin curves*. arXiv:1701.02303. Substantially revised in April 2019.

EXTENDED RESEARCH VISITS

Trimester Program “Periods in Number Theory, Algebraic Geometry and Physics”

Hausdorff Research Institute for Mathematics, Bonn, 25/02/2018 — 31/03/2018

IRTG Exchange program, Visiting Graduate Student

Korteweg-de Vries Institute for Mathematics, Amsterdam, 01/11/2015 — 01/05/2016

SCHOLARSHIPS AND AWARDS

Research fellowship, Space-Time-Matter, 01/11/2016 — 31/12/2016.

Scholarship of the International Research Training Group (IRTG), GRK 1800, 01/11/2013 — 31/10/2016.

Scholarship of the Berlin Mathematical School (BMS), Phase I, 01/10/2011 — 30/09/2013.

Merit Scholarship, Bilkent University, Top 1%, Full Scholarship, 2008 — 2011.

Orhan Alisbah Fellowship Award, Bilkent University 2010,

Awarded by the Department of Mathematics of Bilkent to the most successful undergraduate student.

SELECTED TALKS (OUT OF 46)

1. *Computing transcendental invariants of hypersurfaces*, in Minisymposium: “Numerical methods in algebraic geometry”, SIAM Conference on Applied Algebraic Geometry 2019, Bern/Switzerland, 11/07/2019.
2. *Computing periods of hypersurfaces*, in Colloquium for “Periods, Moduli spaces and the Arithmetic of Algebraic Varieties”, Mainz/Germany, 27/06/2019.
3. *Numerical transcendental methods for computing Picard and Hodge groups*, in Number Theory Seminar at MIT, Cambridge/USA, 08/01/2019.
4. *Numerical methods in transcendental algebraic geometry*, in Seminar “Geometria Diferencial” at IMPA, Rio/Brazil, 16/10/2018.
5. *Computing periods of hypersurfaces*, in Imperial College, London/UK, 18/04/2018.
6. *Computing periods of hypersurfaces*, in Applied Math Seminar, Notre Dame/USA, 06/02/2018.
7. *Computing periods of hypersurfaces*, in Seminar “Computations and Proofs”, Paris/France, 20/11/2017.
8. *Enumerative geometry of double spin curves*, in KTH & SU Algebra and Geometry Seminar, Stockholm/Sweden, 08/11/2017.
9. *Enumerative geometry of theta characteristics*, in Summer School in Enumerative Geometry, Trieste/Italy, 07/2017.
10. *Enumerative geometry of double spin curves*, in ODTÜ–Bilkent Algebraic Geometry Seminar, Ankara/Turkey, 10/2017.

TEACHING EXPERIENCE

1. Hodge theory and periods of varieties, MPI MiS, Spring 2019, lecturer (block course).
2. Representation theory and complex geometry, MPI MiS, Fall 2017, lecturer (joint with Jacinta Torres).
3. Intersection Theory, Fall 2013, Humboldt University, tutor for exercise session.
4. Intersection Theory, Fall 2012, Humboldt University, frequent substitute for main lecturer.
5. Multivariable Calculus, Fall 2010, Bilkent University, tutor for exercise session.

SUPERVISION

Advising master's thesis of Rafael Mohr (Leipzig University), started on Summer 2019, on going.

ORGANIZATIONAL EXPERIENCE

In *Postdoc Hiring Committee* for Max Planck Institute MiS, Non-Linear Algebra Group, 2020.

Co-organizer for *Minisymposium on Riemann Surfaces*, SIAM, 13/07/2019 — 13/07/2019, Bern/Switzerland.

Co-editor of a special issue in *Le Matematiche* dedicated to cubic surfaces, to appear in 2020.

Co-organizer for *Cubic surfaces event* in Oslo, 13/05/2019.

Master administrator for the *Cubic Surfaces Wiki* (<http://cubics.wikidot.com>).

Co-organizer for *Non-Linear Algebra Seminar*, 12/2018 — 05/2019, Leipzig/Germany.

Co-organizer for *Numerical Computing in Algebraic Geometry*, 13/08/2018 — 17/08/2018, Leipzig/Germany.

Co-organizer for *Berlin Mathematical School Student Conference*, 18/02/2015 — 20/02/2015, Berlin/Germany.

SERVICE

Student representative at Berlin Mathematical School, 2014.

Reviewer for zbMATH, 2017 — present.

Referee for *Collectanea Mathematica*, 2019 — present.

LANGUAGES

Turkish: Native.

English: Proficient, TOEFL iBT 117/120.

German: Upper Intermediate, CEF B2 Level.

COMPUTER SKILLS

CAS: Magma, Macaulay2, Mathematica, Maple, SageMath, MATLAB.

OS: Linux, MacOS, Windows.

Other: \LaTeX , Java, Shell script, Vim.