

CURRICULUM VITAE of HÜLYA ARGÜZ

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| CONTACT INFORMATION | Université de Versailles Saint-Quentin-en-Yvelines, UFR des sciences, 45 avenue des Etats-Unis 78035 Versailles, France nuromur-hulya.arguz@uvsq.fr |
| PERSONAL INFORMATION | ◊ Nationality: Germany |
| EMPLOYMENT | Université de Versailles, Paris–Saclay, France 10/2019-current Postdoctoral fellow of Fondation Mathématiques Jacques Hadamard Mentor: Dimitri Zvonkine Imperial College London, UK 01/2017-09/2019 Postdoctoral research associate Mentor: Tom Coates |
| SHORT TERM POSITIONS | University of Cambridge, UK 01-03/2018 Visiting fellow Mentor: Mark Gross IAS School, Princeton, USA 09-12/2016 Postdoctoral member Mentor: Paul Seidel |
| EDUCATION | University of Hamburg, Germany, Ph.D., Mathematics, 16/08/2016 <ul style="list-style-type: none">• Thesis title: <i>Log geometric techniques for open invariants in mirror symmetry.</i>• Advisor: Bernd Siebert M.Sc., Mathematics, 28/03/2013 <ul style="list-style-type: none">• Thesis title: <i>Lagrangian submanifolds in Kato-Nakayama spaces.</i>• Advisor: Bernd Siebert Middle East Technical University, Turkey, M.Sc., Mathematics, 2011, with Honours B.Sc., Mathematics, 2008, with Honours |
| PAPERS PUBLISHED/ACCEPTED FOR PUBLICATION IN PEER REVIEWED JOURNALS | <ol style="list-style-type: none">1. H. Argüz: Mirror symmetry for the Tate curve via tropical and log corals, 72 pages, to appear at the Journal of the London Mathematical Society, 2021.2. H. Argüz, M. Gross: The higher dimensional tropical vertex, 90 pages, to appear at Geometry & Topology, 2021.3. H. Argüz, P. Bousseau: Real log curves in toric varieties, tropical curves, and log Welschinger invariants, 57 pages, to appear at Annales de l’institut Fourier, 2021. |

4. H. Argüz: Real loci in (log-) Calabi-Yau manifolds via Kato-Nakayama spaces of toric degenerations, 65 pages, **European Journal of Mathematics**, <https://doi.org/10.1007/s40879-021-00454-z>, 2021.
5. H. Argüz, T. Prince: On the cohomology groups of real Lagrangians in Calabi-Yau threefolds, 32 pages **Experimental Mathematics** <https://doi.org/10.1080/10586458.2021.1926006>, 2021.
6. H. Argüz, T. Prince: Cohomology of the fixed point locus of an anti-symplectic involution on Schoen's Calabi-Yau, **Rendiconti del Seminario Matematico**, Vol.79, 1, pg. 15-20, 2021.
7. H. Argüz, T. Prince: Real Lagrangians in Calabi-Yau Threefolds, **Proceedings of the London Mathematical Society** 121(2), pg. 287-311, 2020.
8. H. Argüz: Topological torus fibrations on Calabi-Yau manifolds via Kato-Nakayama spaces, **Proc. of the GGT (Gökova Geometry Topology) Conferences 2018/2019**, International Press, pg. 176-201, 2021, <https://www.intlpress.com/site/pub/pages/books/items/00000551/index.php>.
9. M. Kalafat, Y. Ozan, H. Argüz: Self dual metrics on non-simply connected 4-manifolds, **Journal of Geometry and Physics**, Volume 64, pg 79-82, 2013.
10. M. Kalafat, H. Argüz: Complex and symplectic structures on Panelled Web 4-manifolds, **Topology and its Applications**, 159, no:8, pg 2169-2173, 2012.

PAPERS
SUBMITTED TO
PEER REVIEWED
JOURNALS

11. H. Argüz, P. Bousseau, (2021): The flow tree formula for Donaldson-Thomas invariants of quivers with potentials, 50 pages, **arXiv:2102.11200**, submitted.

OTHER
PUBLICATIONS

12. H. Argüz: Toric degenerations and tropical enumeration of real curves with Welschinger signs, **Oberwolfach reports** 27/2019 DOI: 10.4171/OWR/2019/27, 45-47, 2019.
13. H. Argüz: Log-geometric techniques for open invariants in mirror symmetry, **PhD thesis, University of Hamburg**, <http://ediss.sub.uni-hamburg.de/>, 2017.
14. H. Argüz: Floer theory for the Tate curve via tropical geometry, **Oberwolfach reports** no 23/2015, DOI: 10.4171/OWR/2015/23, 1290-1293, 2015.
15. H. Argüz: Lagrangians submanifolds in Kato-Nakayama spaces, **MSc thesis, University of Hamburg**, 2013.

HONORS AND
AWARDS

- ◇ European Commission Marie-Curie grant, 253,052 €, 2021.
- ◇ Junior fellowship, Institut Mittag-Leffler, Sweden, 30000 SEK, 2020.
- ◇ Postdoctoral Laureate, Fondation Mathématiques Jacques Hadamard, 2019-2021.
- ◇ Conference organisation grants from the London Mathematical Society, The Heilborn Institute, and the Fondation Compositio Mathematica, to organize the conference on "New Perspectives on SYZ Mirror Symmetry" at Imperial College, 10000 GBP, 2020.
- ◇ PhD scholarship, RTG 1670 funded by DFG, 2013-2016.

- ◇ Qualification Scholarship, RTG 1670 funded by DFG, 2012-2013.
- ◇ Finalist at the Fame Lab Competition, organized by the British Council, for communicating “Calculus” to the public on a national TV channel, 2007.
- ◇ Money Award for ranking as 7th among half a million students in the yearly national high school entrance examination in Turkey (2000).

INVITED TALKS AT
INTERNATIONAL
CONFERENCES AND
WORKSHOPS

1. 20/06/2021 “XIV. International Workshop Lie Theory and Its Applications in Physics”, Sofia, Bulgaria, **online**.
2. 15/06/2021 “Summer school of the ANR on Symplectic, real, and tropical aspects of enumerative geometry”, **le Croisic, France**.
3. 09/01/2021 “Joint Mathematics Meetings of American Mathematical Society”, Special Session on Arithmetic and Algebraic Geometry, **online**.
4. 29/09/2020 “Workshop on Floer-theoretic and algebro-geometric aspects of SYZ mirror symmetry”, Simons Collaboration on Homological Mirror Symmetry, **online**.
5. 08/12/2020 “FRG Workshop on Moduli Spaces and Stability”, <http://homepages.math.uic.edu/coskun/frg2020.html>, **online**.
6. 20/02/2020, Kyoto University, “The 5th KTGU Mathematics Workshop for Young Researchers”, **Kyoto, Japan**.
7. 20/06/2019, Oberwolfach, “Workshop on Logarithmic Algebraic Geometry”, **Oberwolfach, Germany**.
8. 28/03/2019, University of Loughborough, “Geometry and Physics Workshop”, **Loughborough, UK**.
9. 02/02/2019, University of Freiburg, “Fourth Meeting for Young Women in Mathematics”, **Freiburg, Germany**.
10. 15/10/2018, KIAS, “Matrix Factorizations and Mirror Symmetry”, **Seoul, South Korea**.
11. 10/06/2018, “57th Annual Georgia Topology Conference”, **Georgia, USA**.
12. 27/03/2018, Institut Mittag-Leffler, “Workshop on Tropical Geometry”, **Djursholm, Sweden**.
13. 08/02/2018, GLEN “British Algebraic Geometry Meeting”, **Sheffield, UK**.
14. 14/12/2017, Higher School of Economics, “Conference on Mirror Symmetry and Related Topics”, **Moscow, Russia**.
15. 04/08/2017, IBS Center for Geometry and Physics “Pacific Rim Conference on Complex and Symplectic Geometry”, **Pohang, South Korea**.
16. 04/2015, Oberwolfach workshop on “Tropical Aspects in Geometry, Topology and Physics”, **Oberwolfach, Germany**.

OTHER INVITED
TALKS

17. 25/06/2021, Tropical Geometry in Zoom (TGIZ) Seminar organised by Martin Ulirsch and Lorenzo Fantini at Frankfurt, **online**.
18. 6/05/21, Audition for a maitre de conférence post in Algèbre, Arithmétique, Géométrie algébrique at Université Paris Saclay, Orsay **online**.
19. 22/04/2021, Audition for a maitre de conférence post in geometry at Université d'Angers, **Angers, France**.
20. 19/04/2021, Audition for a maitre de conférence post in Algèbre et géométrie at Université de Paris, **online**.
21. 13/04/2021, "Seminar on Algebra, Geometry and Physics", Max Planck Institute Bonn joint with Humboldt University Berlin, **online**.
22. 02/04/2021, "Seminar on cluster algebras and quiver representations", organised by Bernhard Keller and Pierre-Guy Plamondon, **online**.
23. 26/03/2021, "Seminar on cluster algebras and quiver representations", organised by Bernhard Keller and Pierre-Guy Plamondon, **online**.
24. 03/02/2021 Tenure-track job interview, "Vrije Universiteit Amsterdam", **online**.
25. 12/01/2021 "Laboratoire de Mathématiques de Versailles Algebra and Geometry Seminar", **online**.
26. 09/12/2020 "Boston University Geometry and Physics Seminar ", organised by Yu-Shen Lin and Siu Cheong Lau at Boston/USA, **online**.
27. 03/12/2020 "Northwestern University Geometry and Physics Seminar", organised by Ezra Getzler, Dogancan Karabas, and Eric Zaslow, **online**.
28. 03/12/2020 "Zoom Algebraic Geometry Seminar", organised by Ivan Cheltsov at Edinburgh, UK, **online**.
29. 31/10/2020 Seminar series on "Moduli Across the Pandemic", organised by Dawei Chen and Qile Chen, **online**.
30. 16/09/2020 "UCGEN Algebraic Geometry Seminars", <https://sntp.ca/ucgen/>, **online**.
31. 09/05/2020, "Zoomerfest" mathematics seminars organized by Nikon Kurnosov, Moscow, Russia, **online**.
32. 27/04/2020, "Seminar in Real and Complex Geometry", organised by Eugenio Shustin at **Tel Aviv, Israel**.
33. 24/04/2020, "Seminar on cluster algebras and quiver representations", organised by Bernhard Keller at **Paris, France**.
34. 20/01/2020, Laboratoire de Mathématique Jean Leray, Nantes, "Itinerant seminar on Tropical Geometry in Europe", **Nantes, France**.
35. 05/12/2019, IST Austria, "Seminar on Algebraic Geometry ", **Klosterneuburg, Austria**.
36. 15/11/2019, Paris Diderot University, "Seminar on Cluster algebras and quiver representations", **Paris, France**.
37. 08/11/2019, Paris Diderot University, "Seminar on Cluster algebras and quiver representations", **Paris, France**.

38. 06/11/2019, University of Versailles – Paris Saclay, “Seminar on Arithmetic and Algebraic Geometry”. **Versailles, France**,
39. 18/10/2019, Sorbonne University, “Seminar on Enumerative Algebraic Geometry”, **Paris, France**.
40. 31/01/2019, Radboud University, “Invited Job Interview Talk, for a position of assistant professorship”, **Nijmegen, Netherlands**,
41. 16/11/2018, Sorbonne Université, “Séminaire de Géométrie Enumérative”, **Jussieu, France**,
42. 10/01/2018, Chinese University of Hong-Kong, “Mirror Symmetry and String Theory”, **Hong-Kong**.
43. 07/12/2017, University of Hannover, “Seminar on Algebraic Geometry”, **Hannover, Germany**.
44. 09/05/2017, University of Warwick, “Algebraic Geometry Seminar”, **Warwick, UK**.
45. 27/02/2017, Imperial College, “Algebraic Geometry Seminar”, **London, UK**.
46. 15/12/2016, University of Pennsylvania, “Homological Mirror Symmetry Seminar”, **Philadelphia, USA**.
47. 13/12/2016, University of Princeton, “Algebraic Geometry Seminar”, **Princeton, USA**.
48. 09/12/2016, Columbia “Symplectic Geometry, Gauge Theory and Categorification Seminar”, **NYC, USA**.
49. 06/12/2016, University of California, Berkeley “Algebraic Geometry Seminar”, **Berkeley, USA**.
50. 29/11/2016, University of Texas Austin, “Seminar of the research group of Sean Keel”, **Austin, USA**.
51. 14/11/2016, University of Rochester, “Geometry Seminar”, **Rochester, USA**
52. 03/11/2016, Simons Center, “Seminar on The Math of Gauge Fields”, **Stony-Brook, USA**.
53. 09/2016, IAS School, “Postdoctoral Members Seminar”, **Princeton, USA**.
54. 05/2016, University of Luxembourg, “Seminar on Algebra, Geometry and Quantization”, **Luxembourg**.
55. 12/2015, North German Algebraic Geometry Seminar, **Berlin, Germany**.
56. 09/2015, Max Planck Institute for Mathematics, “Seminar on Algebra, Geometry and Physic”, **Bonn, Germany**.
57. 02/2014, “Annual meeting of the RTG 1670: Mathematics inspired by string theory and quantum field theory”, **Travemünde, Germany**.
58. 09/2013, “Autumn School on Algebraic Geometry” Slides at the bottom of the website: [/urlhttps://sites.google.com/site/schoolrationalcurves/schedule](https://sites.google.com/site/schoolrationalcurves/schedule), **Poitiers, France**.

MINI COURSES

59. 01/2020 Kyoto University, “Lecture Series on Tropical Vertex”, **Kyoto, Japan**.
60. 01/2018, Guangzhou University, “Mini-course on Tropical Geometry”, **Guangzhou, China**.

VIDEOS OF RECORDED TALKS

- ◇ “Tropical enumeration of real log maps and log Welschinger invariants”, Tropical Geometry in Zoom seminar. Video available at youtube:
<https://www.youtube.com/watch?v=F8VeCuQ5Dmw>
- ◇ “Enumerating log maps via wall-crossing” at the NSF FRG Workshop on Moduli Spaces and Stability. Video available at youtube:
<https://www.youtube.com/watch?v=1khZwVbgKBM>
- ◇ “Enumerating log maps via wall-crossing” at the ZAG (Zoom Algebraic Geometry) seminar organised by Ivan Cheltsov. Video available at youtube:
<https://www.youtube.com/watch?v=BQ-FQ4Zo0r8>
- ◇ “The higher dimensional tropical vertex” at the online workshop of Simon’s collaboration on “Homological Mirror Symmetry”. Video available at the: workshop’s website.
- ◇ “Log geometric techniques for open invariants in mirror symmetry” at the Simons Center. Video available at: Stony-Brook video portal
- ◇ “Log geometric techniques for open invariants in mirror symmetry”, at the IAS school, short talks of postdoctoral members. Video available at: IAS video portal

TEACHING EXPERIENCE

- ◇ Lecturer for “Riemannian Geometry”, Imperial College London, UK, 2018-2019.
- ◇ TA for “Algebra”, in German, University of Hamburg, Germany, 2014.
- ◇ TA for “Algebraic geometry II”, University of Hamburg, Germany, 2013.
- ◇ TA for “Differential Geometry”, “Calculus with Analytic Geometry”, “Advanced Calculus”, “Calculus for Engineers” at Middle East Technical University, Turkey, 2009-2011.

SUPERVISION

- ◇ M.Sc. student at Imperial College London (subsequent position: PhD at the University of Edinburgh).

SERVICE

- ◇ Reviewer at zbMath.
- ◇ Reviewer for AMS Mathematical Reviews.

CONFERENCE ORGANIZATION

- ◇ Co-organiser of the “Conference on New Perspectives on SYZ Mirror Symmetry”, at Imperial College London, 2021, <https://sites.google.com/view/imperial-syz>.

LANGUAGES

- ◇ English, fluent
- ◇ French, intermediate
- ◇ German, native
- ◇ Turkish, fluent