Angelina Zheng
CURRICULUM VITAE

Contact Information

University of Tübingen, Department of Mathematics
Auf der Morgenstelle 10, 72076 Tübingen
e-mail: zheng@math.uni-tuebingen.de

Current Position

October 2024 – Present **Alexander von Humboldt fellow**, University of Tübingen

Research interests

Tropical curves, Low-gonality curves, Rational cohomology of moduli spaces of curves, Compactification of moduli spaces of curves

Academic Positions

October 2022 – September 2024 **Postdoctoral fellow**, University of Roma Tre

Aug 2022 – Dec 2022 **Visiting Postdoc**, University of Stockholm

Feb 2022 – Sep 2022 **Postdoctoral fellow**, University of Pavia

Education

2018 – 2021 (PhD defense: 11 January 2022)
PhD in Mathematics, University of Padova
Title of dissertation: "On the cohomology of moduli spaces of trigonal curves."
Supervisor: Prof. Orsola Tommasi

2016 – 2018
Master degree (*laurea magistrale*) in Mathematics, University of Bologna
Curriculum: General and applicative
Title of dissertation: "Comparison theorems of GAGA type and Serre duality."
Supervisor: Prof. Luca Migliorini
Final mark: 110/110 cum laude

2013 – 2016
Bachelor degree (*laurea triennale*) in Mathematics, University of Bologna
Title of dissertation: "Classificazione delle curve ellittiche viste come curve algebriche piane."
Supervisors: Prof. Alessandro Gimigliano and Prof. Davide Aliffi
Final mark: 110/110 cum laude

February 2017 – July 2017
Erasmus student at University of Amsterdam

Awards and Scholarship

Nominated as member of the *EMS Young Academy*, 2025–2028.

Humboldt fellowship for postdoctoral Researchers, 2024–2026. grant for a of 24 months Postdoctoral fellowship by Alexander von Humboldt Foundation.

Vergstiftelsen Foundation grant for a 24 months Postdoctoral position (2024–2026) at Stockholm University.
Project: "Stable and unstable cohomology of moduli spaces of curves".
Main applicant: Prof. Jonas Bergström.
(Renounced in favor of the Humboldt fellowship).

Gini Foundation grant for a research period abroad, 2021.

Winner of "Premio di studio a favore di studenti meritevoli iscritti nell a.a. 2014/2015 a corsi di studio dell'Università di Bologna".

Talks and Seminars

January 9, 2025. Seminar "Tropical trigonal curves" at the *Seminario di Algebra e Geometria* of the University of Bologna.

December 9–11, 2024. Invited speaker at *Women in Algebra and Symbolic Computation III* in Bad Dürkheim.

November 6, 2024. Seminar "Tropical trigonal curves" at the *Oberseminar Kombinatorische Algebraische Geometrie* of the University of Tübingen.

March 11–14, 2024. Invited speaker at the workshop *Enumerative Geometry and Arithmetic* at University of Leiden.

February 13, 2024. Seminar "Stable cohomology of moduli spaces of hyperelliptic curves on Hirzebruch surfaces" at the *Oberseminar Kombinatorische Algebraische Geometrie* of the University of Tübingen.

December 1, 2023. Invited speaker at the workshop *Algebraic Geometry in Pavia: young perspectives* at University of Pavia.

September 20–22, 2023. Invited speaker at the *Youngish Researchers Meeting in Algebra and Geometry 2023* at University of Roma Tre.

July 3–7, 2023. Invited speaker at the *29th Nordic Congress of Mathematicians* at Aalborg University.

February 9, 2023. Seminar "Stable cohomology of moduli spaces of low-gonality curves" at the *Geometry Seminar* of the University of Roma Tre.

December 21–22, 2022. Invited speaker at *XMaths Workshop 2022* at the Department of Mathematics of the University of Bari.

November 30, 2022. Invited speaker at *Insalate di Matematica* at University of Milano-Bicocca.

November 9, 2022. Invited speaker at *MDU seminar* at Mälardalens Universitet.

October 19, 2022. Seminar "Stable cohomology of the moduli space of trigonal curves" at the *KTH & SU Algebra and Geometry seminar* of the KTH Royal Institute of Technology and Stockholm University.

April 6–8, 2022. Invited speaker at *Fifth Meeting for Young Women in Mathematics "Cohomological Methods in Geometry"* at the University of Freiburg.

January 29, 2022. Invited speaker at *MAP: Moduli Across the Pandemic*, online seminar series.

February 3, 2021. Graduate seminar *Introduction to the moduli space of smooth curves and its compactification* at the University of Padova.

June 26, 2020. Learning seminar *Stable reduction of curves* at the Virtual school Algebraic and Tropical Online Meetings (ATOM).

Publications and preprints

Melo, M. and Zheng, A. *Tropical trigonal curves.* preprint arXiv:2501.03903, 2025.

Bergström, J. and Zheng, A. *Stable cohomology of moduli spaces of hyperelliptic curves on Hirzebruch surfaces.* preprint arXiv:2312.14800. To appear in Pure and Applied Mathematics Quarterly, (2025).

Wong Y., M. and Zheng, A. *Rational cohomology of $\mathcal{M}_{4,1}$*, Math. Nachr., 1–21, (2025). https://doi.org/10.1002/mana.202400294.

Zheng, A. *Stable cohomology of the moduli space of trigonal curves*, International Mathematics Research Notices 2024 (2), 1123–1153 (2024). https://doi.org/10.1093/imrn/rnad011.

Zheng, A. *Rational cohomology of the moduli space of trigonal curves of genus 5*, manuscripta math. 169, 603–631 (2022). https://doi.org/10.1007/s00229-021-01347-x.

Research stays

2022 **Visiting researcher**, Stockholm University, 5 months.

Teaching and Mentoring

September 2024 . Tutor for the mini-course *Tropical moduli spaces of curves and Jacobians moduli space of curves and its Deligne-Mumford compactification* at *Trieste Algebraic Geometry Summer School (TAGSS) 2024 - Tropical Geometry and Related Topics .*
Instructor: Prof. Margarida Melo.

February 2024 – September 2024 . Teaching assistant for the course Geometry
Department of Mathematics and Physics, University of Roma Tre.
Instructor: Prof. Margherita Lelli Chiesa.

July 2023. Advisor for AGNES summer school at Brown University.

October 2021 – January 2022. Teaching assistant for the course Geometry
Department of Physics and Astronomy, University of Padova.
Instructor: Prof. Remke Nanne Kloosterman.

October 2020 – January 2021. Teaching assistant for the course Geometry
Department of Physics and Astronomy, University of Padova.
Instructor: Prof. Remke Nanne Kloosterman.

October 2019 – January 2020. Teaching assistant for the course Geometry
Department of Physics and Astronomy, University of Padova.
Instructor: Prof. Remke Nanne Kloosterman.

October 2017 –Janaury 2018. Tutor for the course Geometry 1A
Department of Mathematics, University of Bologna.
Instructor: Prof. Mirella Manaresi.

Outreach activities

Kids University 2021, University of Padova.

Matematica: che professione?!, 2021, University of Padova.

Circoli Matematici 2020, University of Padova.

Kids University 2019, University of Padova.

Other activities

Member of the Unione Matematica Italiana, 2025–Present.

Reviewer for zbMATH, 2020–Present.

PhD representative in the Department Council, Academic Years 2019-2020 and 2020–2021.

Computer skills

Python, Matlab, Singular, Macaulay2, LaTeX, HTML.

Language skills

Italian: native; English: Level C1 (IELTS: 7/9); Chinese: basic; German: basic.

Tübingen, March 12, 2025.