Alexander Elzenaar

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RESEARCH AND TEACHING POSITIONS	**Max-Planck-Institut für Mathematik in den Naturwissenschaften**, Leipzig, Germany

- PhD student   Apr. 2022 – ongoing
  - Supervisor: Prof. Dr. Michael Joswig

The University of Auckland, New Zealand

- Research assistant (Professional Casual Staff)   2020 – 2021
  - Construction and symmetry properties of spherical (t, t)-designs
  - Supervisor: Dr. Shayne Waldron
- Tutor and marker in the Department of Mathematics   2019 (Sem. 2) – 2022 (Summer sem.)
  - Tutoring and marking: single- and multi-variate calculus; complex calculus; linear algebra; logic and proofwriting; mathematics for computer science; computational mathematics; mathematics for non-mathematicians (infinities, topology, fractals); real analysis

EDUCATION

The University of Auckland, New Zealand

- Master of Science with First Class Honours in mathematics   2021 – 2022
  - Degree to be officially conferred in Sept. 2022.
  - Thesis: *Deformation spaces of Kleinian groups* (https://aelzenaar.github.io/msc_thesis.pdf)
  - Advisors: Dist. Prof. Gaven Martin (NZ Inst. of Adv. Study, Massey Uni.), Dr. Jeroen Schillewaert
- Bachelor of Science (Hons) with First Class Honours in mathematics   2020
  - Dissertation: *Toric varieties* (https://aelzenaar.github.io/hons/dissertation.pdf)
  - Advisor: Dr. Jeroen Schillewaert
- Certificate in Languages   awarded 2020
  - Russian and Ancient Egyptian
- Bachelor of Science, major in mathematics   2017 – 2019
  - Between 2016 and early 2019, I was enrolled in a conjoint Mathematics (BA)/Physics (BSc) degree
  - Exchange student at the University of Toronto, 2018 fall semester

The University of Canterbury, New Zealand

- STAR programme   2016
  - First year university mathematics program for secondary school students

AWARDS & SCHOLARSHIPS

- University of Auckland Department of Mathematics Student Research Conference prize   2021
- University of Auckland Postgraduate Honours / PG Diploma Scholarship   2020
- University of Auckland Summer Research Scholarship   2019 – 2020
  - Project: Numerical construction of spherical (t, t)-designs
  - Advisor: Dr. Shayne Waldron
- University of Auckland Faculty of Arts Deans List   2017
- NZQA Outstanding Scholar Award   2016
  Limited to top 40–60 secondary school students in New Zealand

PUBLICATIONS AND PREPRINTS

[3] A. Elzenaar, G. Martin, and J. Schillewaert, "Concrete one complex dimensional moduli spaces of hyperbolic manifolds and orbifolds". In: *2021-22 MATRIX annals*. Ed. by David R. Wood, Jan de Gier, Cheryl E. Prager, and Terrence Tao. MATRIX Book Series 5. Springer, to appear. arXiv:2204.11422 [math.GT], 2022.

[2] A. Elzenaar, G. Martin, and J. Schillewaert, "The combinatorics of the Farey words and their traces." (preprint), arXiv:2204.08076 [math.GT], 2022.

[1] A. Elzenaar, G. Martin, and J. Schillewaert, "Approximations of the Riley slice" (preprint), arXiv:2111.03230 [math.GT], 2021.

PROFESSIONAL AFFILIATIONS

New Zealand Mathematical Society, Student member

[*2022-08-10*]