

# 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

• Studying properties of the real algebraic variety 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

▪ MSc. in mathematics

2021 – 2022 (thesis submitted)

• Thesis: *Deformation spaces of Kleinian groups*

• Advisors: Dist. Prof. Gaven Martin (NZ Inst. of Adv. Study, Massey Uni.), Dr. Jeroen Schillewaert

▪ BSc. (hons) in mathematics with first class honours

2020

• Dissertation: Toric varieties  
• Advisor: Dr. Jeroen Schillewaert

▪ Certificate in Languages

awarded 2020

• Russian and Ancient Egyptian

▪ BSc. 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

[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

[2022-03-18]