

Dr Anton Baykalov

Curriculum Vitae

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Education

2017–2021 **PhD in Mathematics**, *The University of Auckland, New Zealand.*

Supervisors Professor Eamonn O'Brien & Associate Professor Jianbei An

Thesis Intersection of conjugate solvable subgroups in finite classical groups

Description In this thesis I solve Problem 17.41 from the [Kourovka notebook](#) for the case of an almost simple group G with the socle isomorphic to $L_n(q)$, $U_n(q)$ or $PSp_n(q)'$.

2014–2016 **Master of Mathematics and Computer Science**, *Novosibirsk State University, Russia.*

2010–2014 **Bachelor of Mathematics with thesis**, *Novosibirsk State University, Russia.*

Publications

- 2025 Anton A. Baykalov, Alice Devillers and Cheryl E. Praeger. *Proper partial linear spaces affording imprimitive rank 3 automorphism groups*, under review in the Journal of Algebra, <https://arxiv.org/abs/2505.05124>
- 2025 Anton A. Baykalov. *Base sizes for finite unitary and symplectic groups with solvable stabilisers*, International Journal of Algebra and Computation, 2025. <https://doi.org/10.1142/S0218196725500237>
- 2025 Anton A. Baykalov. *Base sizes for finite linear groups with solvable stabilisers*, Journal of Group Theory, 2025. <https://doi.org/10.1515/jgth-2023-0125>
- 2024 Anton A. Baykalov. *On algebraic normalisers of maximal tori in simple groups of Lie type*, Journal of Group Theory, vol. 27, no. 6, 2024, pp. 1357–1383.) <https://doi.org/10.1515/jgth-2023-0070>
- 2023 Anton A. Baykalov, Alice Devillers and Cheryl E. Praeger. *Rank three innately transitive permutation groups and related 2-transitive groups*, **Innov. Incidence Geom.** 20(2023), no.2-3, 135–175. <https://doi.org/10.2140/iig.2023.20.135>
- 2021 Anton A. Baykalov. *Intersection of conjugate solvable subgroups in finite classical groups*. **PhD Thesis**, The University of Auckland. <https://arxiv.org/abs/1703.00124>
- 2017 Anton Baik. *Intersection of conjugate solvable subgroups in symmetric groups*. **Algebra Logic** 56, 87–97 (2017). <https://doi.org/10.1007/s10469-017-9431-z>

Work experience

- Jan 2025 – present time Postdoctoral researcher, School of Mathematical and Statistical Sciences, University of Galway.
- June 2023 – Dec 2024 Research Associate, Department of Mathematics and Statistics, The University of Western Australia.
- Jan – June, 2023 Temporary Lecturer, Department of Mathematics, The University of Auckland.
- Jan – June, 2022 Research Assistant, The University of Auckland. Preparing MAGMA packages for computing representatives of conjugacy classes of finite simple groups of Lie type G_2 and F_4 together with Professor Eamonn O'Brien.

Teaching experience

- 2023 Teaching the course [MATHS 254](#) (Fundamental Concepts of Mathematics, for undergraduate students, class of about 60 students) at the University of Auckland
- 2021 Teaching the course [MATHS 326](#) (Combinatorics, for undergraduate students, class of about 30 students) at the University of Auckland
- 2019 Tutoring for the course MATHS 120 (an introduction to linear algebra) at the University of Auckland
- 2016–2017 Tutoring for the Algebra course (linear algebra and introduction to groups, rings and other algebraic structures) at Novosibirsk State University

Academic service roles

- Jan 2025 – present time Convenor of a reading group "Machine Learning for Mathematics", School of Mathematical and Statistical Sciences, University of Galway.
- July 2023 – Dec 2024 Convenor for the Groups and Combinatorics seminar, Department of Mathematics and Statistics, The University of Western Australia.

Outreach

- 2010–2016 Teaching Olympiad mathematics and related topics to middle-school and high-school students on various summer schools and in school math clubs in Novosibirsk including four semesters (2014–2016) of teaching twice a week in Novosibirsk math club "[Sov'onok](#)."

Languages

- Russian **Mother tongue**
English **Fluent**