

Summer Scholarships in Mathematics

Ever wondered what research in Mathematics is like? Want to give it a go?



The mathematics department will be offering scholarships of \$5500 (tax free) for undergraduate students to spend 10 weeks over the summer working on a research project with an academic staff member.

Interested students should discuss potential projects with Mathematics staff: a list of projects on offer is available online or at the Mathematics office.

The Department of Mathematics wants to enhance the diversity of its postgraduate student body, and strongly encourages applications from women, Māori and Pasifika students.

Applications open on June 15, and should be made online at:
<https://www.auckland.ac.nz/en/for/future-postgraduates/scholarships-and-awards/summer-research-scholarships1.html>

Applications close on July 29.

For further information, contact Claire Postlethwaite:
Room 303-510, c.postlethwaite@auckland.ac.nz, ext. 88817.



Summer Scholarships in Mathematics

Projects and supervisors

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| Teachers unpack mathematical conventions | Igor' Kontorovich |
| Programs for gifted and talented school students in mathematics | Igor' Kontorovich |
| Nilpotent subgroups of classical groups over rings | Jianbei An |
| Lie ring structures of nilpotent subgroups of symplectic groups over integer rings | Jianbei An |
| Latin squares and NP-completeness | Padraic Bartlett |
| Algebraic geometry and cryptography | Steven Galbraith |
| Hotelling games on rectangular grids | Arkadii Slinko |
| Attribute-based encryption | Arkadii Slinko |
| Hamiltonian cycles in vertex-transitive graphs | Gabriel Verret |
| Generalised inverse limits and spectacular subsets of the Hilbert cube | Sina Greenwood |
| Algebraic curves | Igor Klep |
| The Cayley-Hamilton theorem and invariants of matrices | Igor Klep |
| Vanishing sums of roots of unity | Igor Klep |
| Okounkov bodies associated to complex algebraic varieties | Sione Ma'u |
| Finding equiangular lines and their (projective) symmetries | Shayne Waldron |
| Useful redundancies - finite tight frames | Shayne Waldron |
| Solar radiation and tipping points in Earth's history | Anna Barry |
| Climate models for Snowball Earth | Anna Barry |
| Modelling and analysis of clustered ventilation in the lung | Graham Donovan |
| Movement of immune cells and the role of HIV | Graham Donovan |
| Bifurcations in a system with three time scales | Vivien Kirk |
| Lorenz and computational chaos | Hinke Osinga |
| Analyzing animal movement data | Claire Postlethwaite |
| Modelling EEG data in the transition to unconsciousness | Claire Postlethwaite |
| Excluded volume effects for particle diffusion | Steve Taylor |

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