

Artane Jérémie Siad

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LANGUAGES French, English.

NATIONALITY France, Canada.

EDUCATION **University of Toronto, Toronto, Canada.**
PhD student in Pure Mathematics, September 2016 – present,
Committee: Stephen Kudla, Arul Shankar (advisor), Jacob Tsimerman.

University of Cambridge, Cambridge, United Kingdom.
GONVILLE AND CAIUS COLLEGE

Master of Advanced Study in Mathematics, October 2015 – June 2016

- Degree Honours: With Merit.
- Essay: The Hodge decomposition theorem for non-compact manifolds, advised by Alexei Kovalev.

University of Waterloo, Waterloo, Canada.

Bachelor of Mathematics, September 2010 – June 2014

- Degree Honours: With Distinction and Dean’s Honour List.

SCHOLARSHIPS AND AWARDS 2020–2021 Queen Elizabeth II/Steve Halperin Graduate Scholarship in Science & Technology
2019–2020 University Wide Award – McCuaig–Throop Bursary
2019–2020 Ontario Graduate Scholarship
2018–2019 Ontario Graduate Scholarship
2017–2018 Ontario Graduate Scholarship
2015–2016 Canada Graduate Scholarship – Master’s Program at the University of British Columbia (NSERC CGS – M) (declined)
2012–2013 Undergraduate Student Research Award (NSERC USRA)
2010–2011 Rene Descartes Scholarship
2010–2011 University of Waterloo President’s Scholarship of Distinction

GRADUATE COURSEWORK

<input type="checkbox"/> The Atiyah–Singer Index Theorem	<input type="checkbox"/> Gromov–Witten Invariants
<input type="checkbox"/> Riemann Surfaces	<input type="checkbox"/> Arithmetic Dynamics
<input type="checkbox"/> Functional Analysis	<input type="checkbox"/> Introduction to Shimura Varieties
<input type="checkbox"/> Groups and Representations	<input type="checkbox"/> Algebraic D -modules
<input type="checkbox"/> Algebraic Curves	<input type="checkbox"/> Automorphic Forms and Representation Theory II: Functoriality, the Trace Formula and beyond Endoscopy
<input type="checkbox"/> Commutative Algebra	<input type="checkbox"/> Arithmetic of Shimura Curves
<input type="checkbox"/> Algebraic Geometry	<input type="checkbox"/> BGG Category \mathcal{O} for semi-simple and Kac–Moody algebras.
<input type="checkbox"/> Complex Manifolds	
<input type="checkbox"/> Modular Forms	
<input type="checkbox"/> Arithmetic Invariant Theory and Arithmetic Statistics	

RESEARCH

1. **Average 2-torsion in the ideal group of monogenic orders**, (with Arul Shankar, Ashvin Swaminathan, and Ila Varma), in preparation.
2. **Monogenic fields with odd class number Part II: even degree**, <https://arxiv.org/abs/2011.08842>, 49 pages.
3. **Monogenic fields with odd class number Part I: odd degree**, <https://arxiv.org/abs/2011.08834>, 48 pages.
4. **C_4 -fields and a family of singular quartic del Pezzo surfaces**, (with Stanley Xiao), in preparation.

TALKS

“Average 2-torsion in the class group of monogenic fields.”, Number Theory/Representation Theory Seminar, University of Wisconsin-Madison. (October 2020)

“Average 2-torsion in the class groups of monogenic rings and fields.”, University of Toronto Number Theory Seminar, University of Toronto. (February 2020)

“The Shilov boundary and the relative interior.”, Berkovich Spaces Learning Seminar, University of Toronto. (November 2019)

“Class group statistics: stability and instability.”, ADIMOM seminar, Toronto. (September 2019)

“A q -microscope for supercongruences of Ramanujan type.”, University of Toronto Graduate Student Seminar, University of Toronto. (September 2018)

“Animation Rendering using D-Wave.”, University of Toronto Researchers in Industrial Mathematics, University of Toronto. (August 2018)

“Optimal Cloud Storage Strategy”, University of Toronto Researchers in Industrial Mathematics, University of Toronto. (August 2018)

“Central extensions of groups and Lie algebras”, Conformal Field Theory Learning Seminar, University of Toronto. (May 2017)

“The Klein Correspondence in \mathbb{CP}^3 ”, 20th Canadian Undergraduate Mathematics Conference, Université de Montréal. (July 2013)

“The geometry of Yang-Mills fields, Part 06”, Waterloo Geometry Working Seminar, University of Waterloo. (July 2013)

“The geometry of Yang-Mills fields, Part 02”, Waterloo Geometry Working Seminar, University of Waterloo. (May 2013)

CONFERENCE PARTICIPATION

Hot Topics: Recent progress in Langlands Program, Mathematical Sciences Research Institute. (April 2019)

Canadian Number Theory Association Conference, CNTA XV, Université Laval. (July 2018)

Hausdorff Trimester Program: Periods in Number Theory, Algebraic Geometry and Physics, Hausdorff Research Institute for Mathematics. (March/April 2018) – [funded by institute]

Hot Topics: Galois Theory of Periods and Applications, Mathematical Sciences Research Institute. (March 2017) – [funded by institute]

Workshop on Heights and Applications to Unlikely Intersections, Fields Institute. (February 2017)

Fields Medal Symposium in Honour of Manjul Bhargava, Fields Institute. (November 2016)

Canadian Undergraduate Mathematics Conference, Université de Montréal. (July 2013)

TEACHING
EXPERIENCE

Winter 2021 Instructor, University of Toronto,
{ APM236 Applications of Linear Programming.
Summer 2020 Instructor, University of Toronto,
{ MAT235 Calculus II.
Fall 2019 Instructor, University of Toronto,
{ MAT135 Introduction to Calculus.
Summer 2019 Instructor, University of Toronto,
{ MAT235 Calculus II.

Fall 2020 Teaching Assistant, University of Toronto,
{ MAT415 Algebraic number theory.
{ MAT315 Introduction to number theory.
Winter 2020 Teaching Assistant, University of Toronto,
{ MAT136 Introduction to Calculus. (Head Teaching Assistant)
{ MAT235 Calculus II.
{ APM346 Partial Differential Equations.
Fall 2019 Teaching Assistant, University of Toronto,
{ MAT235 Calculus II.
Winter 2019 Teaching Assistant, University of Toronto,
{ MAT235 Calculus II.
{ MAT237 Multivariable Calculus.
Fall 2018 Teaching Assistant, University of Toronto,
{ MAT235 Calculus II. (double assignment)
{ MAT237 Multivariable Calculus.
{ MAT224 Linear Algebra II.
Winter 2018 Teaching Assistant, University of Toronto,
{ MAT235 Calculus II.
Fall 2017 Teaching Assistant, University of Toronto,
{ MAT271 Insights from Mathematics.
{ MAT223 Linear Algebra.
{ MAT235 Calculus II.
Winter 2017 Teaching Assistant, University of Toronto,
{ MAT224 Linear Algebra II.
{ MAT235 Calculus II.
Fall 2016 Teaching Assistant, University of Toronto,
{ MAT223 Linear Algebra.
{ MAT235 Calculus II.

REFERENCES

Available upon request.