

# Jérémy Champagne

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| CONTACT INFORMATION        | Department of Pure Mathematics<br>University of Waterloo<br>200 University Avenue West<br>Waterloo, Ontario, N2L 3G1   | jchampagne@uwaterloo.ca |
| RESEARCH INTERESTS         | Equidistribution problems, Analogues on function fields, Diophantine approximation, Geometry of numbers, Circle method, Additive number theory, Transcendence problems.  |                         |
| EDUCATION                  | <b>University of Waterloo</b> (2021-present)<br>Ph. D. in Pure Mathematics<br>Advisor: Yu-Ru Liu<br>Topic: Equidistribution problems over function fields<br><br><b>Université d'Ottawa</b> (2019-2021)<br>M. Sc. in Mathematics<br>Advisor: Damien Roy<br>Topic: Diophantine approximation with signs constraints<br><br><b>Université d'Ottawa</b> (2014-2019)<br>B. Sc. in Mathematics  |                         |
| PUBLICATIONS AND PREPRINTS | J. Champagne et D. Roy, Diophantine approximation with constraints, <i>Acta Arith.</i> <b>207</b> , no. 1 (2023), 57 – 99.<br><br>J. Champagne et D. Roy, A transference inequality for rational approximation to points in geometric progression, <i>Hardy-Ramanujan J.</i> <b>42</b> (2019), 70 – 72.  |                         |
| PRESENTATIONS              | <b>4 June 2023</b> – “Diophantine approximation by linear forms with angular restrictions” – Summer meeting of the <i>Canadian Mathematical Society</i> , held in Ottawa.<br><br><b>31 January 2023</b> – “Geometry of numbers as a tool for Diophantine approximation” – Student number theory seminar (U. of Waterloo)<br><br><b>1 November 2022</b> – “Interesting results in equidistribution theory” – Student number theory seminar (U. of Waterloo)<br><br><b>28 June 2022</b> – “Diophantine approximation with angular restrictions” – Student number theory seminar (U. of Waterloo)<br><br><b>17 May 2022</b> – “Waring’s problem and the circle method” – Student number theory seminar (U. of Waterloo) |                         |
| CONFERENCES ATTENDED       | <b>1-4 December 2023</b> – <i>Winter meeting of the Canadian Mathematical Society (CMS)</i> , held in Montréal.<br><br><b>7-8 October 2023</b> – <i>Midwest Arithmetic Geometry and Number Theory Series (MAG-NTS)</i> , held in Ann Arbor.  |                         |

**2-5 June 2023** – *Summer meeting of the Canadian Mathematical Society (CMS)*, held in Ottawa.

**2-5 December 2022** – *Winter meeting of the Canadian Mathematical Society (CMS)*, held in Toronto.

**15-16 October 2022** – *Conférence de théorie des nombres Québec-Maine*, held in the city of Québec.

TEACHING  
ASSISTANTSHIPS

**University of Waterloo**

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| Fall   | 2023 | Advanced algebra (marking , giving tutorials).<br>Elementary number theory (content reviewing, marking).<br>Analytic number theory (content reviewing, marking). |
| Summer | 2023 | Fields and Galois theory (marking).  |
| Winter | 2023 | Fields and Galois theory (content reviewing, marking).<br>Tutoring centre (helping for MATH135 and MATH136).   |
| Fall   | 2022 | Algebra for Honours Mathematics (marking).<br>Linear Algebra 2 for Honours Mathematics (marking).  |
| Spring | 2022 | Algebraic number theory (marking).   |
| Winter | 2022 | Elementary number theory (marking).<br>Advanced linear algebra 1 (marking, giving tutorials).  |
| Fall   | 2021 | Calculus I for Honours students in mathematics (marking).<br>Calculus I for Engineering (marking).   |

HONOURS AND  
AWARDS

2023-2024: Queen Elizabeth II Scholarship in Science & Technology (QEII-GSST)

2022: Women in Mathematics - Directed reading program mentorship award, University of Waterloo

*This award recognizes the valuable time and commitment that mentors invested in helping an undergraduate student throughout the term to develop insight and skills in Mathematics.*

2022: Prix de la Commission des études supérieures en sciences, Université d'Ottawa  
*Awarded annually for an outstanding master's thesis in one of the disciplines in the Commission on graduate studies in sciences.*

GRADUATE  
COURSEWORK

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| <input type="checkbox"/> Algebraic number theory   | <input type="checkbox"/> Modular forms                        |
| <input type="checkbox"/> Diophantine approximation | <input type="checkbox"/> Toric varieties (audit)              |
| <input type="checkbox"/> Analytical number theory  | <input type="checkbox"/> Analytic methods for Dioph. problems |

SERVICE

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| Since Fall 2023             | Member of the <i>Student Committee (StudC)</i> of the <i>Canadian Mathematical Society (CMS)</i> . I am also co-editor for the CMS student journal, <i>Notes from the Margins</i> . |
| Summer 2022 to Fall 2023    | Part of the local union drive ( <i>Organize uWaterloo</i> ), which achieved its goal of forming a Teaching Assistant union in December 2023.  |
| Summer 2022 and Winter 2024 | Mentor for the <i>Directed Reading Program (DRP)</i> organised by the <i>Women in Mathematics (WiM)</i> committee. I also volunteer for WiM on a regular basis.                     |
| Fall 2022 and Summer 2023   | Co-organised, with Sourabhashis Das, the <i>Student Number Theory Seminar</i> .   |
| Fall 2023                   | Co-organised, with Sourabhashis Das, a learning seminar on <i>Sieve methods</i> .   |
| Summer 2023                 | Co-organised, with Sourabhashis Das, a learning seminar on <i>Function fields analogues in number theory</i>  |
| Winter 2023                 | Co-organised, with Yash Singh, a learning seminar on <i>Elliptic curves</i> .   |