

Oisín Flynn-Connolly

Curriculum Vitae

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Education

- 10/2021–10/2024 **PhD in mathematics**, *Université Sorbonne Paris-Nord, Paris*, Thesis “Higher commutativity in algebra and algebraic topology” ([Draft](#), [Report 1](#)) supervised by Grégory Ginot, Included a two-month stay with Fernando Muro in Seville (02/2024-03/2024)
- 09/2019–06/2020 **M2 “Arithmétique, Analyse, Géométrie”**, *Université Paris-Saclay*, Mention bien, Thesis: “Homotopy theory of the little n -discs operad” ([Final version](#)) supervised by Felix Wierstra and Grégory Ginot
- 09/2015–06/2019 **B.A. (Honors) in mathematics**, *Trinity College Dublin*, First class honours. Gold medallist., Thesis: “Universal enveloping pre-Lie algebras” supervised by Vladimir Dotsenko

Awards

- 2021 Marie Skłodowska-Curie Action *Cofund* PhD research fellowship
- 2019 Trinity College Dublin gold medal for academic performance in final exams.
- 2017 Trinity Foundation Scholarship (‘schols’)
- 2017 First place team, second place individual, Irish Intervarsity Mathematical Competition
- 2014 & 2015 Represented Ireland at the International Mathematical Olympiad

Publications

- 2023 Dotsenko, V., Flynn-Connolly, O.: Three Schur functors related to pre-Lie algebras, *Math. Proc. Camb. Phil. Soc.*

Preprints

- Flynn-Connolly, O., Moreno-Fernández, J., Wierstra, F.: A recognition principle for iterated suspensions as coalgebras over the little cubes operad, *submitted*
- Flynn-Connolly, O., Moreno-Fernández, J.: Higher order Massey products for algebras over algebraic operads, *submitted*
- Flynn-Connolly, O.: An obstruction theory for strictly commutative algebras in positive characteristic, ArXiv preprint 2404.16681

In Preparation

- Flynn-Connolly, O.: A higher Hochschild-Konstant-Rosenberg Theorem and the Deligne conjecture
- Flynn-Connolly, O.: Homotopically, E_∞ algebras do not generalise commutative dg-algebras
- Flynn-Connolly, O.: A p -adic de Rham complex

Remark: These are currently chapters of the author's PhD thesis intended to be adapted into separate articles for publication.

Ongoing Collaborations

- Flynn-Connolly, O., Moreno-Fernández, J., Wierstra, F.: Homotopy operations from the little n -cubes operad

Teaching

- Spring 2022 **Calculus II**, *Université Sorbonne Paris Nord*
- Spring 2022 **Euclidean and non-Euclidean geometry**, *Université Sorbonne Paris Nord*
- Autumn 2018 **Maths for STEM: Trinity Access Program**, *Trinity College Dublin*
& Spring
2019

Upcoming Research Talks

- Sep 2024 *TBA*, seminar of Université de Toulouse
- Aug 2024 *Higher invariants in homotopy theory*, 37th Annual Meeting of the Irish Mathematical Society, Queen's University Belfast

Research Talks

- Feb 2024 *Strictly commutative algebra in positive characteristic*, seminar of Seville University
- Jan 2024 *Strictly commutative algebra in positive characteristic*, seminar of Stockholm University
- Nov 2023 *The geometry of iterated suspensions*, seminar of Université de Lille
- Nov 2023 *p -adic homotopy theory*, seminar of Universidad de Malaga
- Oct 2023 *The geometry of iterated suspensions*, seminar of Université Sorbonne Paris Nord

Poster Presentations

- Aug 2023 *Corecognition for iterated suspensions*, 36th Annual Meeting of the Irish Mathematical Society, University of Limerick
- July 2023 *Corecognition for iterated suspensions*, Young Topologists Meeting, EPFL, Lausanne

Popularization Talks

- Apr 2024 *Groebner bases and automated theorem-proving*, PhD student seminar of USPN
- Nov 2022 *Introduction to infinity-categories*, topology PhD student seminar of USPN

Relevant Work Experience

- 06/2018–07/2018 **Research Intern**, Project “*Random matrices, genus expansions and the symmetric group*”, Worked with Prof. Neil O’Connell
- 06/2017–07/2017 **Research Intern**, Project “*The category of quasi-parabolic vector bundles*”, Worked with Prof. Sergey Mozgovoy
- 2016–2019 **Trainer**, *Olympiad camps*
- 09/2016–06/2018 **Secretary**, *Dublin University Mathematical Society*
- 09/2017–06/2018 **Teaching Assistant**, *School of Mathematics, Trinity College Dublin*
- 09/2020–01/2022 **Tutor for Irish secondary school students**, *Trinity Academy*

Language Skills

- English Mother tongue
- French Professional capacity (have lectured and taught through it)

Programming Skills

- Typesetting \LaTeX , HTML (intermediate), CSS (beginner)
- Scientific Computation Python, Sage (intermediate), Haskell, C, C++ (beginner)

References

- Prof. G. Ginot, *Université Sorbonne Paris Nord*, ginot@math.univ-paris13.fr
- Ass. Prof. J. Moreno-Fernández, *Universidad de Malaga*, morenofdezjm@gmail.com
- Ass. Prof. G. Horel *Université Sorbonne Paris Nord*, horel@math.univ-paris13.fr