# **Dustin Connery-Grigg**

Address Institut de Mathématiques de Jussieu -

Paris Rive Gauche (IMJ-PRG)

Sorbonne Université Bureau 15-16-506 4 place Jussieu, 75252 Paris Cedex 5

Language

English: Mother tongue

Skills French: Fluent

RESEARCH INTERESTS

Hamiltonian dynamics, Floer homology, Smooth dynamical systems, Symplectic topology,

Geometric analysis, Topological analysis of data

POSITIONS FSMP Postdoctoral Fellow

Nov 2022 - Aug 2024

Institut de mathématiques de Jussieu-Paris Rive Gauche

FRQNT Postdoctoral Fellow

Sept 2024 - Aug 2026

Institut de mathématiques de Jussieu-Paris Rive Gauche

# EDUCATIONAL BACKGROUND

## Université de Montréal, Québec, Canada

PhD, Département de mathématiques et de statistique, March 2022

- Thesis subject: Hamiltonian Floer theory on surfaces
- Advisor: François Lalonde

M.S. Département de mathématiques et de statistique, Jan 2017

- Thesis subject: Symplectic fibrations and the geometry of the group of Hamiltonian diffeomorphisms
- Advisor: François Lalonde

## McGill University, Québec, Canada

B.Sc. (Hon), Jan 2014

- Thesis subject: The geometry and topology of data: Minimax error bounds for manifold estimation
- Advisor: Masoud Asgharian

# SCHOLARSHIPS AND AWARDS

# **Scholarships**

• FRQNT Postdoctoral fellowship	Sept. 2024 - Aug. 2026
• FSMP Postdoctoral fellowship	Nov. 2022 - Nov. 2024
• ISM Scholarship for Outstanding PhD Candidates	Sept. 2020 - Dec. 2020

• FRQNT - Doctoral research scholarship April 2018- Sept. 2020

# Awards

Bourse d'excellence J.A. DeSève	Dec. 2020
• Bourse d'excellence DMS-FESP	Jan. 2019 - April 2019
• Bourse d'excellence DMS-FESP	Sept. 2018 - Dec. 2018
• Bourse d'excellence DMS-FESP	Jan. 2018 - April 2018

# INVITED TALKS AND PRESENTATIONS

#### Conferences

• From smooth to C<sup>0</sup>-symplectic geometry: topological aspects CIRM, July 2023 and dynamical implications

• CAST - Contact And Symplectic Topology Conference 2024, Bochum, Feb. 2024

• From Hamiltonian Dynamics to Symplectic Topology and Beyond. A 2024 celebration of Claude Viterbo and his mathematics Institut Henri Poincaré, June 2024

#### Seminars

• Berlin-Hamburg Symplectic Geometry Seminar HU Berlin, Jan. 19 2024

ullet Geometry and Analysis Oberseminar

RWTH-Aachen University, Dec. 14 2023

• Analysis & Geometry Seminar

Antwerp University, Sept. 2023

• Local seminar of the Équipe Analyse Algébrique

Institut de mathématiques de Jussieu – Paris Rive Gauche, Feb. 2023

• Working seminar on symplectic topology and related topics (Series of 2 talks)

Institut de mathématiques de Jussieu – Paris Rive Gauche, Jan. 2023

• Séminaire Symplectix

Institut Henri Poincaré, Nov. 2022

• Tel Aviv University Geometry and Dynamics seminar

Virtual, March 2022

• Symplectic Zoominar of CRM-Montréal, Princeton/IAS, Tel Aviv, and Paris Virtual, Jan. 2022

• Montréal Symplectic Seminar

Université du Québec à Montréal, Jan. 2020

#### Outreach

• Symposium annuel de physique/mathématiques pour un avenir en recherche et en industrie Montréal, March 2020

### COMMUNITY

• I have refereed for The Journal of Symplectic Geometry, Forum of Mathematics, Sigma, and Revista Matemática Iberoamericana

• Working seminar on Hamiltonian and symplectic dynamics
(Co-organized with Yuan Yao)

Sept. 2023 - Present

Weekly Working Seminar on Symplectic Topology
 and Related Topics
 (Co-organized with Vincent Humilière and Sobhan Seyfaddini)

• Montréal Symplectic Graduate Student's Seminar (Co-organized with Jean-Phillipe Chassé)

Sept 2018 - May 2022

Teaching

Chargé de Travaux Dirigés (TDs) Winter 2024 MA003 - Constructions et raisonnements Sorbonne Université

mathématiques

Teaching Assistant Autumn 2019 MAT 1400 - Multivariable Calculus Université de Montréal

Teaching Assistant Autumn 2015

MAT 1600 - Linear Algebra Université de Montréal

Teaching Assistant Winter 2015

MAT 2130 - Complex Analysis Université de Montréal

Teaching Assistant Autumn 2014

MAT 1903 - Differential Calculus Université de Montréal

# **PUBLICATIONS**

D. Connery-Grigg, Hamiltonian floer theory on surfaces: linking, positively transverse foliations and spectral invariants, Inventiones mathematicae, (2024), pp. 1–92

D. Connery-Grigg, F. Lalonde, and J. Payette, *Graphes dans les surfaces et ergodicité topologique*. Accepted at the *Canadian Journal of Mathematics* (2024). Preprint available at: https://arxiv.org/abs/2209.00516