

Oisín Hamilton

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Experience

Royal Meteorological Institute of Belgium, PhD Fellow

Brussels, Belgium

Oct 2021 – Oct 2024

- Coding lead on significant modifications of a coupled atmosphere model ([qgs](#)).
- Lead developer introducing a meridional gradient in the qgs model in key parameters to allow simulation of climate change forcings.

WSP, Transport Planner

London, UK

Oct 2017 – Apr 2021

- Project lead for modelling electric car uptake across the UK, using targeted census data, modelling the car life cycle, and combining multiple forecasts.
- Modelled the number of people on each train, during COVID lockdown, using ticket data to ensure distancing could be maintained.
- Project manager and coding lead to create a workflow to combine timetable, performance, and planned engineering work data to output a forecast for capacity for the London Overground.
- Coding lead on a research project for the Department of Transport, calculating the number of journeys taken on season tickets.
- Coding lead for calculating emissions of rail services, using timetable information, rolling stock types, and forecast carbon emissions of the UK power grid.

Education

PhD Atmospheric Modelling and Chaotic Dynamics
Focusing on chaotic dynamical systems.

UC Louvain
2021-2025

MSc Mathematical Modelling (Distinction)
Network modelling, optimisation techniques, & population modelling.

University College London
2018-2020

BA Mathematics (Major) - Philosophy (Minor) (1st Hons)
Statistics and probability, linear algebra, as well as theoretical topics.

Trinity College Dublin
2013-2017

Publications

[Using Unstable Periodic Orbits to Understand Blocking Behaviour in a Low Order Land-Atmosphere Model](#)

Hamilton, O., Demaeyer, J., Crucifix, M. and Vannitsem, S. 2025. *Chaos* (Under review)

[auto-AUTO: A Python Layer for Automatically Running the AUTO-07p Continuation Software](#)

Jonathan Demaeyer & **Oisín Hamilton**. 2025. *JOSS* (under review)

[Multistability in a Coupled Ocean Atmosphere Reduced-order Model: Nonlinear Temperature Equations.](#)

Hamilton, O., Demaeyer, J., Crucifix, M. and Vannitsem, S. 2023. *QJRM*

Skills

Languages & Tech: Python, Julia, VBA, Fortran, Excel best practice, linux based OS

Other: public speaking and presentation skills, project management,

I sail for fun and have raced competitively. I was a senior instructor for four years, managing 10 other instructors.

I enjoy riding my bike. I have completed trips through 13 countries and covered a total distance of over 7,000km.