## Isaac W. Newell

#### Education ————

<b>DPhil in Mathematics</b> University of Oxford	2022–Present
Advisors: Gui-Qiang Chen, Luc Nguyen	
Master of Mathematics and Computer Science	2018–2022
University of Oxford	
Rank 1/36. First Class Honours.	
Thesis: Fundamental Solutions of Linear Partial Differential Operators	

#### Awards and Scholarships \_\_\_\_\_

Clarendon Scholarship, University of Oxford	2022–Present
Mathematical Institute Scholarship	2022–Present
Hoare Prize in Mathematics and Computer Science	2022
Penultimate Year Prize, Oriel College	2021
Academic Scholarship, Oriel College	2019-2022
LMS Undergraduate Research Bursary	2021

# Research Interests \_\_\_\_\_

Partial Differential Equations, Riemannian Geometry.

Currently studying problems related to isometric immersions of Riemannian manifolds, such as the immersion of negatively curved surfaces in three-dimensional Euclidean space.

### Publications and Preprints \_\_\_\_\_

1. N. Boullé, **I. Newell**, P. E. Farrell, and P. G. Kevrekidis (2022). *Two-component 3D* atomic Bose-Einstein condensates support complex stable patterns. arXiv:2208.05703

#### Teaching —

Part B Distribution Theory, TA	2022
Part B Fourier Analysis, TA	2023
Part B Functional Analysis II, revision class tutor	2023

# Internships —

Mathematical Institute, Oxford	2021
Summer Research Internship. Funded by a LMS Undergraduate Research Bursary.	
Project Title: Bifurcation Analysis of Two Coupled 3D Bose-Einstein Condensates	
Supervisor: Patrick Farrell	
Extremely Heavy Industries, Larchmont NY, USA	2019

#### Full stack web development.