## Charles Stewart Hadfield

GENERAL Nationality: New Zealander (birth) charleshadfield.com

French (naturalisation) charles.hadfield@gmail.com

Visa status: O-1 (Green Card: in process)

Date of Birth: June 1991

EMPLOYMENT Rigetti Quantum Computing, Berkeley 2018 - present

Applications Researcher/Mathematician, Theory Division

University of California, Berkeley 2017 - 2018

Charles B. Morrey, Jr. Assistant Professor

EDUCATION École normale supérieure, Paris 2014 - 2017

Doctorate: Structures de Clifford paires et résonances quantiques

Supervisors: Colin Guillarmou, Andrei Moroianu

Université Pierre et Marie Curie, Paris 2013 - 2014

Master 2 Pure Mathematics

The University of Auckland 2010 - 2013

Honours in Mathematics, July 2012 - June 2013

BSc majoring in Mathematics and Physics, 2010 - June 2012

Christ's College, Canterbury 2005 - 2009

SCHOLARSHIPS Finalist for Rhodes Scholarship 2014 (one of seven New Zealand candidates)

AND PRIZES Paris Graduate School of Mathematical Sciences International Scholarship, 2013 - 2014

Collins Prize in Mathematics (top student in Honours), 2013 The University of Auckland Honours Scholarship, 2012, 2013

The University of Auckland Scholarship, 2010 - 2012

Wacher Prize for Academic Head of School, Christ's College, 2009

HM Chrystall Prize for All-round Merit in Sport & Scholarship, Christ's College, 2009

First Prize in New Zealand Junior Mathematics Competition, 2006

Languages Julia, Python

English (native), French (fluent), Spanish (basics), Japanese (rusty)

SPORT 2017 - 2018 Cal Sailing Club, Berkeley

2013 - 2017 Elite Level C.A.Montrouge Hockey, Paris

2010 - 2013 Premier Level Somerville Hockey Club, Auckland

2002 - 2012 Canterbury, Auckland, NZ Hockey Representative and Umpire

**PUBLICATIONS** 

Zeta function at zero for surfaces with boundary

arXiv:1803.10982, submitted

Ruelle and quantum resonances for open hyperbolic manifolds

arXiv:1708.01200, IMRN

Local geometry of even Clifford structures on conformal manifolds arXiv:1611.01665, Ann. Glob. Anal. Geom, with A. Moroianu

Resonances for symmetric tensors on asymptotically hyperbolic spaces arXiv:1609.06527, Anal. PDE

Twistor spaces of Riemannian manifolds with even Clifford structures arXiv:1602.04159, Ann. Glob. Anal. Geom, with G. Arizmendi

Talks

Lectures on topological quantum error correction

July 2019, Rigetti Quantum Computing

Resonances on asymptotically hyperbolic manifolds; the ambient metric approach March 2018, UC Santa Cruz

 $A\ quantum/classical\ correspondence\ on\ hyperbolic\ manifolds$ 

November 2017, Stanford University

Resonances on asymptotically hyperbolic manifolds; the ambient metric approach September 2017, Bay Area Microlocal Analysis Seminar

 $Quantum\ resonances\ on\ asymptotically\ hyperbolic\ space$ 

March 2017, Luminy

Résonances quantiques sur des variétés assymptotiquement hyperboliques October 2016, Université d'Avignon

Géométrie hyperbolique et la fonction zeta de Selberg

February 2016, École normale supérieure

 $Dynamical\ zeta\ functions\ for\ Anosov\ flows,\ after\ Dyatlov,\ Zworski$ 

May 2015, Peyresq

Espaces de twisteurs sur des variétés quaternion-kählériennes

June 2014, Université Pierre et Marie Curie

TEACHING

Honours Introduction to Complex Analysis

Spring 2018, 3<sup>rd</sup> year undergraduate, UC Berkeley

Introduction to Analysis

Spring 2018, 3<sup>rd</sup> year undergraduate, UC Berkeley

Introduction to Abstract Algebra

Fall 2017, 3<sup>rd</sup> year undergraduate, UC Berkeley

Introduction to Differential Geometry

Spring 2015, 3<sup>rd</sup> year undergraduate, Université Paris-Dauphine