

Charles Stewart Hadfield

GENERAL	Nationality: New Zealander (birth) French (naturalisation) USA residency: Green card	<code>charleshadfield.com</code> <code>charles.hadfield@gmail.com</code>
EMPLOYMENT	IBM Quantum, New York 2020 - present Mathematician Rigetti Quantum Computing, Berkeley 2018 - 2019 Mathematician 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 Advisors: Colin Guillarmou, Andrei Moroianu Université Pierre et Marie Curie, Paris 2013 - 2014 Master's in Pure Mathematics The University of Auckland 2010 - 2013 Honours in Mathematics, 2012 - 2013 BSc majoring in Mathematics and Physics, 2010 - 2012	
SCHOLARSHIPS AND PRIZES	Finalist for Rhodes Scholarship 2014 (one of seven New Zealand candidates) Paris Graduate School of Mathematical Sciences International Scholarship, 2013 - 2014 Collins Prize in Mathematics (top student in Honours), 2013 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, French	
PUBLICATIONS	Eleven publications in fields from pure mathematics to hardware implementations of bespoke quantum algorithms. Available on arXiv .	
SPORT	Sailing, Windsurfing, Surfing in New Zealand, France, and California Field Hockey for teams in Canterbury, Auckland, Paris, New York	

TALKS

Measurements of quantum Hamiltonians with locally-biased classical shadows
March 2021, American Physical Society

Dimensional reduction; a workshop on quantum machine learning
December 2020, TJ Watson Research Center, New York

Fermionic encodings; a workshop on the variational quantum eigensolver
January 2020, TJ Watson Research Center, New York
February 2020, Keio University, Tokyo

Dynamical zeta functions on surfaces with boundary
November 2019, UC Berkeley

Lectures on topological quantum error correction
July 2019, Rigetti Quantum Computing

A quantum/classical correspondence on hyperbolic manifolds
November 2017, Stanford University

Resonances on asymptotically hyperbolic manifolds; the ambient metric approach
March 2018, UC Santa Cruz
September 2017, Bay Area Microlocal Analysis Seminar
March 2017, Luminy
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, 3rd year undergraduate, UC Berkeley

Introduction to Analysis
Spring 2018, 3rd year undergraduate, UC Berkeley

Introduction to Abstract Algebra
Fall 2017, 3rd year undergraduate, UC Berkeley

Introduction to Differential Geometry
Spring 2015, 3rd year undergraduate, Université Paris-Dauphine