

RUADHAÍ DERVAN

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POSITIONS

École Polytechnique, Paris Postdoctoral position, hosted by Sébastien Boucksom.	September 2017 - August 2018
University of Cambridge, Gonville & Caius College Research Fellowship.	October 2016 - September 2021
Université libre de Bruxelles Visiting PhD student, hosted by Joel Fine. Fondation Wiener-Anspach Scholar.	February - August 2016

EDUCATION

PhD in Mathematics , University of Cambridge St. John's College Thesis title "Canonical Kähler metrics and K-stability". Supervised by Julius Ross.	2012 - 2016
Part III of the Mathematical Tripos (MASt) , University of Cambridge St. John's College Graduated with distinction.	2011 - 2012
B.A.(Mod) Mathematics , Trinity College Dublin First class honours. Graduated top of year.	2007 - 2011

PUBLICATIONS AND PREPRINTS

Hermitian Yang-Mills connections on blowups (<i>with L. Sektnan</i>)	<i>arXiv:1707.07638</i>
The Kähler-Ricci flow and optimal degenerations (<i>with G. Székelyhidi</i>)	<i>arXiv:1612.07299</i>
Relative K-stability for Kähler manifolds	<i>arXiv:1611.00569</i>
K-stability for Kähler manifolds (<i>with J. Ross</i>)	<i>Math. Res. Lett. (to appear)</i>
A finite dimensional approach to Donaldson's J-flow (<i>with J. Keller</i>)	<i>Comm. Anal. Geom. (to appear)</i>
On K-stability of finite covers	<i>Bull. London Math. Soc. (2016) 48 (4) pp. 717-728</i>
Non-reductive automorphism groups, the Loewy filtration and K-stability (<i>with G. Codogni</i>)	<i>Annales de l'institut Fourier (Grenoble) 66 no. 5 (2016) pp. 1895-1921</i>
Alpha invariants and coercivity of the Mabuchi functional on Fano manifolds	<i>Ann. Fac. Sci. Toulouse Math. Sér. 6, 25 no. 4 (2016), p. 919-934</i>
Uniform stability of twisted constant scalar curvature Kähler metrics	<i>Int. Math. Res. Notices (2016) Vol 15 pp. 4728-4783</i>
Alpha invariants and K-stability for general polarizations of Fano varieties	<i>Int. Math. Res. Notices (2015) Vol 16 pp. 7162-7189</i>

GRANTS

INdAM Grant Awarded to fund the workshop "Moduli of K-stable varieties", with G. Codogni, J. Stoppa and F. Viviani.	2016
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London Mathematical Society ECM Grant 2016
Awarded to fund personal costs of the European Congress of Mathematics 2016 in Berlin.

London Mathematical Society Scheme 8 Grant, Foundation Compositio Grant 2015
Awarded to fund “Postgraduate Conference in Complex Geometry” at the University of Cambridge, with J. Ross.

ACADEMIC VISITS

University of Notre Dame September 2016
Visited Gábor Székelyhidi for three weeks.

Simons Center for Geometry and Physics, Stony Brook University September - October 2015
Participating in the program “Moduli spaces and singularities in algebraic and Riemannian geometry” for four weeks.

INVITED SEMINAR AND CONFERENCE TALKS

Constant Scalar Curvature Metrics in Kähler and Sasaki Geometry, CIRM Marseille (*upcoming*)
January 2018

Symposium in Geometry and Differential Equations, AMSS Beijing
July 2017

Current Developments and New Directions in Kähler Geometry, University of Notre Dame
June 2017

SISSA Trieste
May 2017

Université Pierre-et-Marie-Curie (Paris VI Jussieu)
May 2017

Positivity in Algebraic and Complex Geometry, ICMS Edinburgh
April 2017

Cambridge-Tokyo Algebraic Geometry Workshop, Isaac Newton Institute
March 2017

University of Edinburgh
February 2017

Newcastle University
December 2016

Imperial College London
November 2016

University of Notre Dame
September 2016

European Congress of Mathematics Berlin, Symposium Talk
July 2016

Recent Advances in Complex Differential Geometry, Toulouse
June 2016

Institut de Mathématiques de Toulouse
May 2016

Università degli Studi di Pavia
November 2015

Joint John Hopkins University and University of Maryland Complex Geometry Seminar
October 2015

Simons Center for Geometry and Physics, Stony Brook University
September 2015

Edge Days, University of Edinburgh	June 2015
Università degli Studi Roma Tre	March 2015
Université Pierre-et-Marie-Curie (Paris VI Jussieu)	February 2015
Università degli Studi di Pavia	November 2014
Irish Workshop on Kähler Geometry and Geometric Analysis, University College Cork	May 2014
Aix-Marseille Université	November 2013
Edge Days, University of Edinburgh	June 2013
Junior seminars in Imperial College London (twice), Université libre de Bruxelles and University of Bath (Calf Junior Algebraic Geometry Seminar)	2013 – 2015

ACTIVITIES

Organiser of conference “Moduli of K-stable varieties”	July 2017
Organiser of conference “Postgraduate Conference in Complex Geometry”	September 2016
Local organiser of seminar series “Calf Junior Algebraic Geometry Seminar”	October 2013 - January 2016
Organiser of seminar series “Geometry Tea Junior Seminar”	October 2013 - October 2014
Organiser of Departmental Happy Hour	June 2013 - September 2014
Referee for Asian J. Math, Compositio, Int. Math. Res. Notices, J. Eur. Math. Soc., J. Inst. Math. Jussieu, Proc. Edinb. Math. Soc., two conference proceedings and Mathematical Reviews (MathSciNet).	2016 - present

AWARDS

Smith-Knight & Rayleigh-Knight Prize Awarded for an essay based on research completed in the first year and a half of PhD work.	2014
St John's College Scholarship and College Prize In recognition of high achievement in MAST in mathematics.	2012
Bishop Law Prize and Gold Medal Awarded for finishing first in the mathematics degree with high final mark.	2011
Minchin Prize, Lloyd Exhibition and Hamilton Prize Awarded for finishing first in the third year examinations of the mathematics and theoretical physics degrees.	2010
Foundation Scholarship Awarded on the basis of scholarship exams taken in second year. Approximately fifteen are awarded across all disciplines to second year students each year.	2009

TEACHING

DPMMS, University of Cambridge Supervisor Supervised Part II Differential Geometry.	Michaelmas term 2016
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DPMMS, University of Cambridge

Lent term 2014, 2015

Examples Class Lecturer

Presented assignment solutions and explanations to Part III Complex Manifolds students.

Linyi University, China

July 2012

Summer Lecturer

Lectured an introductory 12 hour course on partial differential equations to final year mathematics undergraduates.

School of Mathematics, Trinity College Dublin

August 2010, 2011

Revision lecturer

Lectured 6 hour revision courses for 2nd year mathematics and theoretical physics students in Complex Analysis (2010) and Equations of Mathematical Physics (2010, 2011).

MEMBERSHIP

London Mathematical Society

2016 - present

CONFERENCES ATTENDED

Constant Scalar Curvature Metrics in Kähler and Sasaki Geometry (*upcoming*)

CIRM Marseille, January 14 - 19 2018

British Algebraic Geometry meeting (*upcoming*)

Cambridge, September 11 - 13 2017

Symplectic geometry - celebrating the work of Simon Donaldson (*upcoming*)

Cambridge, August 14 - 18 2017

Moduli of K-stable varieties

Rome, July 10 - 14 2017

Symposium in Geometry and Differential Equations

AMSS Beijing, July 3 - 7 2017

Current Developments and New Directions in Kähler Geometry

University of Notre Dame, June 26 - 30 2017

Positivity in Algebraic Geometry

ICMS Edinburgh, April 24 - 28 2017

Stability and moduli spaces

American Institute of Mathematics San Jose, January 9 - 13 2017

Algebraic Geometry: Old and New

University of Oxford, September 26 - 30 2016

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University of Oxford, September 9 - 11 2016

European Congress of Mathematics Berlin

Berlin, July 18 - 22 2016

Recent Advances in Complex Differential Geometry

Institut de Mathématiques de Toulouse, June 13 - 22 2016

British Algebraic Geometry meeting

ICMS Edinburgh, April 13 - 15 2016

Postgraduate Conference in Complex Geometry

University of Cambridge, September 9 - 11 2015

Cones and Positivity

Loughborough University, August 4 - 7 2015

2015 Summer Research Institute on Algebraic Geometry

University of Utah, Salt Lake City, July 13 - 17 2015

Edge Days

University of Edinburgh, 5 - 7 June 2015

British Algebraic Geometry meeting
University of Warwick, September 22 - 24, 2014

Asymptotic Aspects of Complex and Algebraic Geometry
Università di Milano Bicocca, 23 - 28 June 2014

Edge Days
University of Edinburgh, 6 - 8 June 2014

Irish Workshop on Kähler Geometry and Geometric Analysis
University College Cork, 12 - 14 May 2014

Minicourses on Stability
University of Coimbra, 10 - 12 April 2014

Traumatic Workshop
Imperial College, 3 - 4 April 2014

William Rowan Hamilton Geometry and Topology Workshop
Trinity College Dublin, 27 - 31 August 2013

Ricci curvature: limit spaces and Kähler geometry
ICMS, Edinburgh, 1 - 5 July 2013

Edge Days
University of Edinburgh, 7 - 9 June 2013

Compactifying Moduli Spaces
CRM Barcelona, 27 - 31 May 2013