

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

Extremal metrics on fibrations (<i>with L. Sektnan</i>)	<i>arXiv:1712.05374</i>
Stable maps in higher dimensions (<i>with J. Ross</i>)	<i>arXiv:1708.09750</i>
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>Math. Ann. (to appear)</i>
K-stability for Kähler manifolds (<i>with J. Ross</i>)	<i>Math. Res. Lett. Vol. 24 No. 3 (2017), pp. 689-739</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. Lond. 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>Ann. Inst. 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. Not. IMRN (2016) Vol 15 pp. 4728-4783</i>
Alpha invariants and K-stability for general polarizations of Fano varieties	<i>Int. Math. Res. Not. IMRN (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
London Mathematical Society ECM Grant Awarded to fund personal costs of the European Congress of Mathematics 2016 in Berlin.	2016

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
 Participated in the program “Moduli spaces and singularities in algebraic and Riemannian geometry” for four weeks.

INVITED SEMINAR AND CONFERENCE TALKS

Singular metrics in Kähler geometry, CIRM Marseille (*upcoming*) February 2019

Degenerations of Calabi-Yau Manifolds, Institut Henri Poincaré Paris (*upcoming*) May 2018

École polytechnique fédérale de Lausanne (*upcoming*) April 2018

Université Paul Sabatier Toulouse (*upcoming*) April 2018

Aarhus University (*upcoming*) February 2018

Joint Bochum, Duisburg-Essen, Köln and Wuppertal Complex Geometry Seminar February 2018

Université Paris-Sud January 2018

Constant Scalar Curvature Metrics in Kähler and Sasaki Geometry, CIRM Marseille January 2018

University of Gothenburg Chalmers November 2017

École Polytechnique Paris November 2017

Université du Québec à Montréal October 2017

Rutgers University-Newark October 2017

Joint King's College London and University College London Geometry Seminar October 2017

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
Université Paul Sabatier Toulouse	May 2016
Università degli Studi di Pavia	November 2015
Joint Johns 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, Compos. Math., Geom. Topol., 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

2009

Awarded on the basis of scholarship exams taken in second year. Approximately fifteen are awarded across all disciplines to second year students each year.

TEACHING

DPMMS, University of Cambridge Supervisor Supervised Part II Differential Geometry.	Michaelmas term 2016
DPMMS, University of Cambridge Examples Class Lecturer Presented assignment solutions and explanations to Part III Complex Manifolds students.	Lent term 2014, 2015
Linyi University, China Summer Lecturer Lectured an introductory 12 hour course on partial differential equations to final year mathematics undergraduates.	July 2012
School of Mathematics, Trinity College Dublin 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).	August 2010, 2011

MEMBERSHIP

London Mathematical Society	2016 - present
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CONFERENCES ATTENDED

Degenerations of Calabi-Yau Manifolds, Institut Henri Poincaré Paris (<i>upcoming</i>)	May 2018
Constant Scalar Curvature Metrics in Kähler and Sasaki Geometry	CIRM Marseille, January 14 - 19 2018
Geometry of Manifolds	Simons Center for Geometry and Physics, October 23 - 27 2017
British Algebraic Geometry meeting	Cambridge, September 11 - 13 2017
Symplectic geometry - celebrating the work of Simon Donaldson	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
Hitchin 70	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