

Roi Docampo Álvarez

Universidade Federal Fluminense ■ Instituto de Matemática e Estatística ■ Niterói, Rio de Janeiro, Brasil
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BIOGRAPHICAL	Born May 22, 1978, in Ourense (Spain).
EMPLOYMENT	Bolsista Ciência sem Fronteiras (Post-doc), Univ. Federal Fluminense, February 2013 – present Wylie Assistant Professor/Lecturer (Post-doc), University of Utah, July 2009 – June 2012 Research/Teaching Assistant (Student), Univ. of Illinois at Chicago, August 2003 – July 2009
EDUCATION	University of Illinois at Chicago, Ph. D. in Mathematics, 2009 Thesis: <i>Arcs on determinantal varieties</i> . Advisor: Lawrence Ein Universidade de Santiago de Compostela, Diploma de Estudios Avanzados, 2003 Universidade de Santiago de Compostela, Licenciatura en Matemáticas, 2001
RESEARCH INTERESTS	Algebraic geometry and valuation theory: birational geometry, multiplier ideals, arc spaces, jet schemes, motivic integration, Riemann-Zariski spaces, Berkovich spaces, determinantal varieties, spherical varieties.
PUBLICATIONS	[1] Roi Docampo, <i>Arcs on determinantal varieties</i> , Trans. Amer. Math. Soc. 365 (2013), no. 5, 2241–2269. arXiv:1011.1930 . [2] Tommaso de Fernex and Roi Docampo, <i>Jacobian discrepancies and rational singularities</i> , J. Eur. Math. Soc. 16 (2014), no. 1, 165–199. arXiv:1106.2172 .
PREPRINTS	[3] Tommaso de Fernex, Roi Docampo, Shunsuke Takagi, and Kevin Tucker, <i>Comparing multiplier ideals to test ideals on numerically Q-Gorenstein varieties</i> . arXiv:1401.7946 . [4] Tommaso de Fernex and Roi Docampo, <i>Terminal valuations and the Nash problem</i> . arXiv:1404.0762 .
INVITED TALKS	<i>Nash problem II</i> , 06/13/2014, FRG Special Month in Ann Arbor, Univ. of Michigan <i>Terminal valuations and the Nash problem</i> , 05/14/2014, IMPA <i>Discrepancies on non-Q-Gorenstein varieties</i> , 02/25/2014, Univ. of Illinois at Chicago <i>Schubert varieties, arc spaces, and LCT's</i> , 02/17/2014, LEGAL 2014, Teresópolis <i>Jacobian discrepancies and rational singularities</i> , 10/31/2013, Univ. Federal do Rio de Janeiro <i>Jacobian discrepancies and rational singularities</i> , 09/18/2013, 2° Congr. Jóvenes Invest., Seville <i>Jacobian discrepancies and rational singularities</i> , 08/30/2013, COLGA, Univ. Federal Fluminense <i>Inversion of adjunction, arc spaces and Jacobian discrepancies</i> , 08/02/2013, NCTS/TPE, Taiwan <i>Jacobian discrepancies and rational singularities</i> , 07/29/2013, NCTS/TPE, Taiwan <i>Jacobian discrepancies and rational singularities</i> , 07/04/2013, 14th ALGA Meeting, Teresópolis <i>Jacobian discrepancies and rational singularities</i> , 04/17/2013, IMPA <i>Arcs on determinantal varieties II — Motivic integration</i> , 04/02/2013, Univ. Federal Fluminense <i>Arcs on determinantal varieties</i> , 03/26/2013, Universidade Federal Fluminense <i>Singularities in birational geometry and multiplier ideals</i> , 03/08/2013, University of Oklahoma <i>Jacobian discrepancies and rational singularities</i> , 04/14/2012, WAGS, University of Washington

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INVITED TALKS (CONT.)

Discrepancies, 03/14/2012, University of Illinois at Chicago
Jacobian discrepancies and rational singularities, 02/21/2012, Ohio State University
Discrepancies and Nash blowing-ups, 02/08/2012, Purdue University
Jacobian discrepancies and rational singularities, 02/08/2012, Purdue University
Jacobian discrepancies and rational singularities, 10/23/2011, AMS Special Session, Utah
Arcs on determinantal varieties, 04/15/2011, Brown University
Geometry of arcs under birational maps, 11/07/2010, AMS Special Session, Notre Dame
Arcs on determinantal varieties, 09/18/2009, University of Notre Dame
Arcs on determinantal varieties, 09/08/2009, University of Utah
Arcs on determinantal varieties, 12/10/2008, University of Michigan
Jet schemes, contact loci and singularities, 03/03/2005, University of Valladolid (Spain)

LECTURE SERIES

Course on valuation theory and Berkovich spaces, 01/2011 – 05/2011, University of Utah

EXPOSITORY TALKS

The dual complex of singularities (after de Fernex, Kollár, Xu), 11/2013, IMPA
Arakelov Geometry: Green Currents, 05/2013, IMPA
Dynamics of automorphisms of compact complex surfaces, 05/2013, Univ. Federal Fluminense
The cohomology of p -adic symmetric spaces, 02/2011, University of Utah
Introduction to Berkovich spaces, 04/2010, University of Utah
Introduction to G.I.T., 11/2008, University of Illinois at Chicago
Toric varieties, 01/2008 – 05/2008, University of Illinois at Chicago
Complete conics, 11/2007, University of Illinois at Chicago
The proof of resolution of singularities, 09/2006 – 12/2007, University of Illinois at Chicago
Intersection theory, 08/2005 – 01/2006, University of Illinois at Chicago
Tropical algebraic geometry and Bernstein's theorem, 04/2005, University of Illinois at Chicago
Positivity in algebraic geometry, 09/2004 – 03/2005, University of Illinois at Chicago
D-Modules and derived categories, 03/2003 – 05/2003, University of Illinois at Chicago

GRANTS AND AWARDS

Bolsista Ciência sem Fronteiras (Atração Jovens Talentos), 02/2013 – 11/2015, CNPq, Brasil
Fulbright Fellowship, 08/2003 – 05/2005, Spanish-American Fulbright Commission
Master's Thesis Travel Grant, 02/2003 – 05/2003, Caixa Galicia Foundation
Scholarship for the Realization of Graduate Studies, 10/2001 – 08/2003, Xunta de Galicia
Premio Nacional de Fin de Carrera de Educación Universitaria (Mención Especial)
(National Award of University Education, Honorable Mention)
2001 – Granted by the Ministry of Education and Culture of Spain
Undergraduate Research Scholarship, 2000 – 2001, Ministry of Education and Culture of Spain

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SERVICE

Referee for *Communications in Algebra*, *Journal of Algebra*, *Journal of Algebraic Geometry*, and *Pacific Journal of Mathematics*.

Co-organizer of the *School on Birational Geometry and Moduli Spaces — VIGRE Mini-course*, June 2010, University of Utah.

Co-organizer of the Algebraic Geometry Seminar at the University of Utah.

TEACHING EXPERIENCE

Foundations of Analysis II, Lecturer, Spring 2012, University of Utah

Foundations of Analysis II, Lecturer, Fall 2011, University of Utah

Special Topics in Algebraic Geometry: Course on Valuation Theory and Berkovich Spaces, Lecturer, Spring 2011, University of Utah

Partial Differential Equations for Engineering Students, Lecturer, Spring 2011, University of Utah

Introduction to Complex Variables, Lecturer, Fall 2010, University of Utah

Calculus II, Lecturer, Spring 2010, University of Utah

Calculus I, Lecturer, Fall 2009, University of Utah

Calculus III Lab (Maple), Teaching Assistant, Fall 2008, University of Illinois at Chicago

Differential Equations, Teaching Assistant, Summer 2008, University of Illinois at Chicago

Calculus III, TA Lecturer, Spring 2008, University of Illinois at Chicago

Emerging Scholars Workshop for Calculus I, Instructor, Spring 2007, University of Illinois at Chicago

Precalculus, Teaching Assistant, Spring 2006, University of Illinois at Chicago

Precalculus, Teaching Assistant, Fall 2005, University of Illinois at Chicago

CONFERENCES ATTENDED

FRG Special Month in Ann Arbor, 05/2014, University of Michigan

Positive Characteristic Algebraic Geometry Workshop, 03/2014, Univ. of Illinois at Chicago

Liberdade em Geometria Algébrica, LEGAL 2014, 02/2014, Teresópolis, Brasil

New Aspects on Singularity Theory, 09/2013, ICMAT, Madrid

2° Congreso de Jóvenes Investigadores, RSME, 09/2013, University of Seville

Algebra and Geometry and Topology of Singularities, Luengo 60th, 09/2013, Miraflores de la Sierra

13th ALGA Meeting, 06/2013, Teresópolis, Brasil

YMIS 13: Seventh Meeting for mathematicians in Segovia, 02/2013, University of Valladolid

Western Algebraic Geometry Symposium, 04/2012, University of Washington

Singularities in Com. Algebra and Alg. Geometry, AMS Sectional Meeting, 03/2012, Univ. of Kansas

Special Session on Algebraic Geometry, AMS Sectional Meeting, 10/2011, University of Utah

Western Algebraic Geometry Symposium, 10/2011, Colorado State University

AIM Workshop: Relating test ideals and multiplier ideals, 08/2011, AIM

2nd International Conference and Workshop on Valuation Theory, 07/2011, Segovia/El Escorial

Western Algebraic Geometry Symposium, 04/2011, Stanford University

Singularities in Algebraic Geometry, AMS Sectional Meeting, 11/2010, Univ. of Notre Dame

Summer School “Berkovich spaces”, 06/2010, Institut de Mathématiques de Jussieu, Paris

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CONFERENCES ATTENDED (CONT.)

School on Birational Geometry and Moduli Spaces — VIGRE Mini-course, 06/2010, Univ. of Utah
Western Algebraic Geometry Symposium, 05/2010, University of British Columbia
Combinatorial, Enumerative and Toric Geometry, 03/2009, MSRI
Modern Moduli Theory, 02/2009, MSRI
Classical Algebraic Geometry Today, 01/2009, MSRI
Michigan-Ohio State-UIC Workshop on Algebraic Geometry, 10/2008, University of Michigan
Alg. Geometry and Commutative Alg. (Hartshorne's 70th), 04/2008, Univ. of Illinois at Chicago
Michigan-Ohio State-UIC Workshop on Algebraic Geometry, 10/2007, University of Michigan
Algebraic Geometry Session, AMS Meeting, 10/2007, DePaul University
Hot Topics: Minimal and Canonical Models in Algebraic Geometry, 04/2007, MSRI
UIC-Purdue Workshop on Alg. Geom. and Comm. Alg., 12/2006, Purdue Univ., West Lafayette
International Congress of Mathematicians, 08/2006, Madrid
Satellite Conference on Algebraic Geometry, 08/2006, University of Valladolid (Segovia Campus)
Moduli Spaces and Arcs in Algebraic Geometry, 08/2006, University of Cologne
Recent Developments in Higher Dimensional Alg. Geom. (JAMI), 03/2006, Johns Hopkins Univ.
AMS Summer Institute in Algebraic Geometry, 07/2005 and 08/2005, University of Washington
Graduate Student Workshop for AMS Summer Inst. in Alg. Geom., 07/2005, Univ. of Washington
YMIS 2005: First Meeting for Young Mathematicians in Sedano, 02/2005, University of Valladolid
PRAGMATIC 2004: Hyperbolicity of Complex Varieties, 08/2004 and 09/2004, Univ. of Catania
Midwest Comm. Alg. and Geom. Meeting (Lipman's fest), 05/2004, Purdue Univ., West Lafayette
Asymptotic and Effective Results in Complex Geom. (JAMI), 03/2004, Johns Hopkins University
Cohomological Methods in Algebraic Geometry, 09/2002, University of Santiago de Compostela
Seminar on Higher Algebraic Geometry, 07/2002, University of Santiago de Compostela

TECHNICAL SKILLS

Operating Systems: Unix, Linux, OS X, Microsoft Windows.
Programming Languages: Python, FORTRAN, C, Java, HTML, PHP.
Others: Sage, Mathematica, Maple, Singular, Macaulay2, \TeX , \LaTeX .

LANGUAGES

Native Speaker of Spanish and Galician
Fluent in English and Portuguese
Reading skills in French and Italian

REFERENCES

Aaron Bertram, University of Utah
Tommaso de Fernex, University of Utah
Lawrence Ein, University of Illinois at Chicago
Christopher Hacon, University of Utah
Mircea Mustață, University of Michigan
Henryk Hecht, University of Utah (teaching)