

Employment

Assistant Professor, University of California, Riverside, 2016 – Present.

Areas of Interest: Algebraic geometry and its interactions with commutative algebra, combinatorics and topology.

Postdoctoral Experience

Gibbs Assistant Professor, Yale University, 2014 – 2016.

Postdoctoral Research and Teaching Fellow, University of British Columbia, 2011 – 2014.

Education

Ph.D. Mathematics, University of Michigan, 2011. Doctoral Advisor: Professor Mircea Mustață.

M.S. Mathematics, Universidad Nacional de Colombia en Medellín, 2005.

B.S. Mathematics, Universidad Nacional de Colombia en Medellín, 2003.

Publications and Preprints

Published and Accepted Articles

J. Gonzalez and K. Karu: *Some non-finitely generated Cox rings*, Compositio Mathematica, Volume 152 (2016), Issue 5, pp. 984–996.

J. Gonzalez and K. Karu: *Bivariant algebraic cobordism*, Algebra & Number Theory, Volume 9 (2015), No. 6, 1293–1336.

J. Gonzalez and K. Karu: *Descent for algebraic cobordism*, Journal of Algebraic Geometry, Volume 24 (2015), No. 5, pp. 787–804.

J. Gonzalez and K. Karu: *Projectivity in algebraic cobordism*, Canadian Journal of Mathematics, Volume 67 (2015), No. 3, pp. 639–653.

J. Gonzalez, M. Hering, S. Payne and H. Süß: *Cox rings and pseudoeffective cones of projectivized toric vector bundles*, Algebra & Number Theory, Volume 6 (2012), No. 5, pp. 995–1017.

J. Gonzalez: *Projectivized rank two toric vector bundles are Mori dream spaces*, Communications in Algebra, Volume 40 (2012), Issue 4, pp. 1456–1465.

J. Gonzalez: *Okounkov bodies on projectivizations of rank two toric vector bundles*, Journal of Algebra, Volume 330 (2011), Issue 1, pp. 322–345.

Preprints

J. Gonzalez and K. Karu: *Universality of K-theory*, arXiv:1301.3815, (2013).

Conference and Seminar Presentations

Invited Talks:

Algebra Seminar, University of California, Los Angeles, April 2017
Geometry & Topology Seminar, San Francisco State University, April 2017
Algebraic Geometry Seminar, University of California, Riverside, , November 2016
V Latin American Congress of Mathematicians, Colombia, July 2017
VII Algebra, Number Theory, Combinatorics and Applications Conference, Colombia, July 2017
Algebra and Number Theory Seminar, University of Maryland, March 2016
Colloquium, National University of Colombia, Medellin, Colombia, March 2016
Colloquium, Lehigh University, February 2016
Colloquium, Amherst College, January 2016
Colloquium, Mount Holyoke College, January 2016.
Colloquium, University of California, Riverside, January 2016
Colloquium, Oklahoma State University, January 2016
AMS Session on Algebraic Geometry, JMM, Seattle WA, January 2016
Algebraic Geometry Seminar, Columbia University, December 2015
Algebraic Geometry Seminar, Brown University, April 2015
Algebraic Geometry Seminar, Yale University, February 2015
Algebraic Geometry Seminar, Harvard-MIT, October, 2014
Algebraic Geometry Seminar, University of Massachusetts, October 2014
Yale Algebraic and Tropical Geometry Secret Seminar, Yale University, October 2014
Colloquium, Johns Hopkins University, February 2014
Colloquium, Cleveland State University, January 2014
Algebraic and Tropical Geometry Seminar, Yale University, January 2014
Joint Mathematics Meetings, AMS Session on Algebraic Geometry, January 2014
Geometry and Physics Seminar, University of British Columbia, January 2014
Fragment Seminar, Colorado State University, November 2013
Colombian National Congress of Mathematicians, Universidad del Norte, July 2013
Bellingham Algebraic Geometry Seminar, Western Washington University, April 2013
Colloquium, Universidad Nacional de Colombia en Medellín, December 2012
Algebraic Geometry Seminar, Ohio State University, October 2012
AMS Sectional Meeting, SS on Geometry of Algebraic Varieties, University of Akron, October 2012
Algebraic Geometry Seminar, University of British Columbia, September 2011
Oberwolfach Workshop: New Developments in Newton-Okounkov Bodies, August 2011
Joint Mathematics Meetings, AMS SS on Birational Geometry & Moduli Spaces, N. Orleans, January 2011
Algebraic Geometry Seminar, University of Utah, November 2010
Algebraic Geometry Seminar, University of Arizona, November 2010
Institut für Mathematik der Brandenburgische Technische Universität Cottbus, Germany, July 2010

Algebra Seminar, University of Connecticut, April 2010
Latin American Colloquium of Algebra, Colombia, 2007
Colombian Congress of Mathematicians, Colombia, 2007

Other Presentations:

Diversity in Mathematics Festival, University of California, Irvine, April 2017
Math Club, University of California, Riverside, November 2016
Upward Bound Math and Science Program, Vista Del Lago High School, Moreno Valley, November 2016
SUMRY Undergraduate Colloquium, Yale University, June 2016
Poster Presentation, WAGS Conference, UC San Diego, November 2013
Poster Presentation, AGNES Conference, Boston College, October 2013
Poster Presentation, AGNES Conference, Brown University, October 2012
Poster Presentation, WAGS Conference, University of Arizona, November 2010
Research Presentation, Topics in Algebraic Geometry Seminar, University of Michigan, November 2010
Poster Presentation, AGNES Conference, University of Connecticut, September 2010
Research Presentation, Summer School on Birational Geometry & Moduli Spaces, Salt Lake City, Utah, June 2010
Research Presentation, Mathematical Research Communities Workshop on Birational Geometry & Moduli Spaces, Snowbird, Utah, June 2010
Poster Presentation, AGNES Conference, University of Massachusetts at Amherst, April 2010
Research Presentation, University of Michigan, April 2009
Research Presentation, Workshop on MMP, Columbus, Ohio, October 2008
Research Presentation, PCMI Summer School, Park City, Utah, July 2008
Algebraic Geometry Student Seminar, University of Michigan, various dates 2006 – 2010

Teaching Experience

University of California, Riverside (Average class size: 35-60 and 7 students)

Instructor, Algebraic Geometry II, Math 243B, Spring 2017
Instructor, Linear Algebra, Math 131, Winter 2017
Instructor, Linear Algebra, Math 131, Fall 2016

Yale University (Average class size: 35 and 7 students)

Instructor, Multivariable Calculus, Fall 2015
Instructor, Multivariable Calculus, Fall 2015
Instructor, Graduate Topics Course in Algebraic Geometry, Spring 2015
Instructor, Multivariable Calculus, Fall 2014
Instructor, Multivariable Calculus, Fall 2014

University of British Columbia (Average class size: 100 students)

Instructor, Integral Calculus, Winter 2014

Instructor, Integral Calculus, Winter 2014

Instructor, Calculus for Commerce, Spring 2013

Instructor, Linear Systems, Winter 2013

Instructor, Linear Systems, Winter 2012

University of Michigan (Average class size: 30 students)

Instructor, Pre-calculus, Spring 2011

Instructor, Calculus I, Fall 2011

Instructor, Calculus II, Fall 2008

Instructor, Calculus I, Fall 2007

Instructor, Calculus I, Fall 2006

Instructor, Pre-calculus, Winter 2006

Instructor, Pre-calculus, Fall 2005

Universidad Nacional de Colombia en Medellín (Average class size: 50 and 15 students)

Instructor, Abstract Algebra III, 2005

Instructor, Introduction to Analysis, 2004

Instructor, Mathematical Reasoning, 2003

Instructor, Linear Algebra, 2003

Professional Activities

Undergraduate Research Mentoring:

Coordinator of the Summer Undergraduate Research program at Yale, SUMRY, 2016.

Project leader at the Summer Undergraduate Research program at Yale, SUMRY, 2015.

Assistant for DAAD RISE Research Internship, University of British Columbia, 2013.

Other Undergraduate Mentoring:

Member of the UCR group in the Nat. Alliance for Doctoral Studies in the Math. Sciences, 2017 – Present.

Sophomore Advisor, Yale University, 2015 – 2016.

Senior Essay Advisor, Yale University, 2015.

Teaching Assistant, *PCMI/IAS Undergraduate Summer School*, Park City, Utah, July 2008.

Consultant for Educational TV show:

Designer of weekly mathematical challenges for Colombian educational TV-show *Piéñsele!*, 2012 – 2013.

Episode samples: <https://www.youtube.com/watch?v=4Q66gWrl87A> <https://www.youtube.com/watch?v=yqwnOYTcEMk>

Research Journal Referee:

Open Mathematics Journal.
Proceedings of the AMS Summer Institute.
Israel Journal of Mathematics.
Michigan Mathematical Journal.
Bulletin of the London Mathematical Society.
Proceedings of the American Mathematical Society.
International Mathematics Research Notices.
Transactions of the American Mathematical Society.

Mathematical Olympiads Mentoring and Contributions to Organization (Selected):

Coordinator, 54th *International Mathematical Olympiad* IMO, Santa Marta, Colombia, 2013.
Grader for several Canadian mathematical contests 2011 – 2014.
Deputy Leader and Academic Coach of the Colombian Team for the 45th *International Mathematical Olympiad* IMO, Athens, Greece, 2004.
Mentor and Instructor, Colombian Mathematical Olympiad Training Programs, 2000 – 2004.

Conference and Seminar Co-Organizer:

Algebraic Geometry Seminar, University of California, Riverside, Fall 2016 – Present.
Special Session in Algebraic Geometry, AMS Sectional Meeting at UC-Riverside, November 2017.
AGNES Spring 2016 Conference, Yale University, 2016.
BATMOBYLE IV Conference, Yale University, April 2016.
BATMOBYLE III Conference, Yale University, November 2015.
BATMOBYLE I Conference, Yale University, November 2014.
Yale University Tropical and Algebraic Geometry Seminar, 2014 – 2016.
University of Michigan Student Algebraic Geometry Seminar, 2009 – 2011.

Fellowships

US Junior Oberwolfach Fellowship, March 2016.
Rackham One-Term Dissertation Fellowship, University of Michigan, Winter 2010
Research Training Grant Fellowship, University of Michigan, Fall 2010
Research Training Grant Fellowship, University of Michigan, Fall 2009
Arthur Herbert Copeland, Sr. Memorial Scholarship, University of Michigan, Spring 2008
Graduate Departmental Scholarship, University of Michigan, Spring 2007
Cameron & John Courtney Scholarship, University of Michigan, Spring 2006
Mazda Fellowship from Mazda Foundation for Arts and Sciences, full coverage of M.S. studies 2003 – 2005
Medellín City Council Fellowship, full coverage of B.S. studies 1999 – 2003

Selected Mathematical Olympiad Awards

International Mathematical Competition for University Students

Every year, prestigious universities around the world send teams of their top three to six undergraduate students. The jury grants First, Second and Third Prizes, Honorable Mentions and Certificates of Participation to students who solve a certain number of problems. www.imc-math.org

First Prize, Cluj Napoca, Romania, 2003

(Note: First Prizes are awarded to several participants)

Second Prize, Warsaw, Poland, 2002

(Note: Second Prizes are awarded to several participants)

Third Prize, Prague, Czech Republic 2001

(Note: Third Prizes are awarded to several participants)

Third Prize, London, England, 2000

(Note: Third Prizes are awarded to several participants)

Colombian National Mathematical Olympiad for University Students

First Place, Bogotá, Colombia, 2002

Second, Third and Fifth Places, Bogotá, Colombia, 1999, 2000, 2001.

Colombian National Mathematical Olympiad for High School Students

First Place, Bogotá, Colombia, 1999

Iberoamerican Mathematical Olympiads

Silver Medal, Undergraduate Level, 2002

Silver Medal, High School Level, 1999