Ana-Maria Castravet   Curriculum Vitae

Laboratoire de Mathématiques
Université de Versailles Saint-Quentin-en-Yvelines
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| **education** | June 2002 | Ph.D. in Mathematics, Massachusetts Institute of Technology |
| | July 1997 | Licenţă in Matematică, University of Bucharest |

appointments	09/18–present	Professor, Université de Versailles
	01/15–08/19	Associate Professor, Northeastern University
	08/13–12/14	Associate Professor, The Ohio State University
	08/11–08/13	Assistant Professor (tenure-track), The Ohio State University
	01/08–07/11	Assistant Professor (tenure-track), University of Arizona
	08/06–12/07	Visiting Assistant Professor, University of Massachusetts Amherst
	08/03–07/06	Instructor, University of Texas at Austin

visiting positions	04/17–06/17	Visiting Scholar, Institut des Hautes Études Scientifiques
	06/16–07/16	Visiting Scholar, Université de Toulouse
	07/14–08/14	Visiting Scholar, Institut des Hautes Études Scientifiques
	05/14–06/14	Visiting Scholar, Universität Bonn
	06/12–07/12	Visiting Scholar, Universität Bonn
	05/11–07/11	Visiting Scholar, Max-Planck Institut Bonn
	01/09–04/09	Research Member, MSRI, Jumbo Program in Algebraic Geometry
	05/08–07/08	Visiting Scholar, Max-Planck Institut Bonn
	05/04–07/04	Visiting Scholar, Institut des Hautes Études Scientifiques
	05/03–07/03	Visiting Scholar, Max-Planck Institut Bonn
	09/02–05/03	Member, Institute for Advanced Study

personal grants & honors	2017–2020	NSF Grant DMS-1701752, PI ($169,000)
	2013–2017	NSF Grant DMS-1302731/DMS-1529735, PI ($125,000)
	2010–2013	NSF Grant DMS-1001157/DMS-1160626, PI ($105,903)
	2009	Association for Women in Mathematics Travel Grant
	1997–2002	Teaching Assistantship, Massachusetts Institute of Technology
	1997	Liberty Mutual Foundation Fellowship Award
	1997	Soros Foundation Travel Grant
	1993-1997	National Scholarship for Exceptional Results, University of Bucharest

	1987-1993	Selection for the National Olympiad of Mathematics, Romania (Honorable Mention 1988, 1992)

other grants

2017–2022	NSF RTG Grant DMS-1645877, Algebraic Geometry and Representation Theory at Northeastern, co-PI ($2,297,587)
2017–2019	NSF Conference Grant DMS-1650462, Collaborative Research, Algebraic Geometry NorthEastern Series (AGNES), co-PI (Total: $210,000, Northeastern: $36,220)
2015	NSF Conference Grant DMS-1502154, Second Latin American School of Algebraic Geometry and Applications (II ELGA), PI ($15,000)
2013	NSF Conference Grant DMS-1302880, Hodge Theory and Classical Algebraic Geometry, co-PI ($27,963)

publications and preprints

A.-M. Castravet, J. Tevelev, Derived category of moduli of pointed curves - I, `arXiv:1708.06340`, submitted

A.-M. Castravet, Mori dream spaces and blow-ups, Algebraic geometry: Salt Lake City 2015, 143–167, Proc. Sympos. Pure Math., 97.1, Amer. Math. Soc., Providence, RI, 2018.

A.-M. Castravet, J. Tevelev, $\overline{M}_{0,n}$ is not a Mori dream space, *Duke Math. J.* **164** (2015), no. 8, 1641–1667

C. Araujo, A.-M. Castravet, Classification of 2-Fano manifolds with high index, *A celebration of algebraic geometry*, 1–36, Clay Math. Proc. **18**, Amer. Math. Soc., Providence, RI, 2013

A.-M. Castravet, J. Tevelev, Hypertrees, projections, and moduli of stable rational curves, *J. Reine Angew. Math.* **675** (2013), 121–180

A.-M. Castravet, J. Tevelev, Rigid curves on $\overline{M}_{0,n}$ and arithmetic breaks, *Compact Moduli and Vector Bundles*, 19–67, Contemp. Math. **564**, Amer. Math. Soc., Providence, RI, 2012

C. Araujo, A.-M. Castravet, Polarized minimal families of rational curves and higher Fano manifolds, *Amer. J. of Math.* **134**, no. 1 (2012), 87–107

A.-M. Castravet, J. Tevelev, Exceptional loci on $\overline{M}_{0,n}$ and hypergraph curves, `arXiv:0809.1699`

A.-M. Castravet, The Cox ring of $\overline{M}_{0,6}$, *Trans. Amer. Math. Soc.* **361** (2009), 3851–3878

A.-M. Castravet, Examples of Fano varieties of index one that are not birationally rigid, *Proc. Amer. Math. Soc.* **135** (2007), 3783–3788

A.-M. Castravet, J. Tevelev, Hilbert's 14'th problem and Cox rings, *Compos. Math.* **142** (2006), 1479–1498

A.-M. Castravet, Rational families of vector bundles on curves, *Internat. J. of Math.* **15**, no. 1 (2004), 13–45; more detailed version: `arXiv:0302133`, `arXiv:0302135`

A.-M. Castravet, Ample and nef divisor classes on Kontsevich moduli spaces, preprint (2001)

invited conference talks

"Algebraic Geometry and Complex Geometry", CIRM, Marseille, December 2020

"Moduli Day - Workshop in Algebraic Geometry", Technische Universität München, January 2020

"Geometry in Pairs", Università degli Studi Roma Tre, December 2019

"The Ninth Congress of Romanian Mathematicians", Galati, Romania, July 2019

"Workshop on Derived Categories, Moduli Spaces and Deformation Theory", Cetraro, Italy, June 2019

"Ideals, Varieties, Applications (Celebrating the Influence of David Cox)", Amherst College, June 2019

"Recent Progress in Moduli Theory" Conference, MSRI, May 2019

"GLEN seminar", University of Manchester, February 2019

"Groups of Birational Transformations" Conference, Université de Rennes, November 2018

"Séminaire Méditerranéen de Géométrie Algébrique", Institut Mathématiques de Marseille, October 2018

"A Day of Algebraic Geometry in Savannah, Georgia" Conference, Georgia Southern University, March 2018

I-70 Algebraic Geometry Symposium, University of Kansas, November 2017

The Abel Symposium "Geometry of moduli", Svolvær, Norway, August 2017

"Positivity in Algebraic and Complex Geometry" Workshop, ICMS, Edinburg, April 2017

"Combinatorial Moduli Spaces" Conference, Fields Institute, Toronto, December 2016

Algebraic Geometry Northeastern Series (AGNES), University of Massachusetts at Amherst, November 2016

Bi-annual Algebraic and Tropical Meeting of Brown and Yale, Brown University, September 2016

"Geometry at the ANU" Conference, Australian National University, August 2016

"Cycles on Moduli Spaces, Geometric Invariant Theory and Dynamics" (2 lectures), ICERM, August 2016

"Interacting Algebraic Geometry" Conference, Institut de Mathématiques de Bourgogne, Dijon, July 2016

"New methods in birational geometry" Conference, Université de Toulouse, June 2016

"Moduli and Automorphic Forms: a Meeting for Women in Mathematics" Conference, Humboldt Universität, Berlin, May 2016

CIMPA-ICTP Research School "Toric methods in geometry, arithmetics, and dynamics", Pontificia Universidad Católica de Chile, Santiago, Chile, January 2016

AMS Summer Institute in Algebraic Geometry, University of Utah, July 2015

"New Techniques in Birational Geometry" Conference, SUNY Stony Brook, April 2015

"Current developments in moduli theory" Conference, Northeastern University, October 2014

Georgia Algebraic Geometry Symposium, University of Georgia, October 2014

"Birational geometry and stability of moduli stacks and spaces of curves" Workshop, Vietnam Institute for Advanced Study in Mathematics, Hanoi, Vietnam, February 2014

Western Algebraic Geometry Seminar (WAGS), University of California San Diego, November 2013

American Mathematical Society Eastern Sectional Meeting, Special Session on "Moduli Spaces in Algebraic Geometry", Boston College, April 2013

"Mirror Symmetry in the Midwest" Conference, University of Wisconsin, November 2012

"Linear Series on Algebraic Surfaces" Workshop, Johannes Gutenberg Universität Mainz, July 2012

"Minimal Model Program" Conference, Erwin Schrödinger International Institute for Mathematical Physics, Vienna, December 2011

UM/UIC/OSU Algebraic Geometry Workshop, University of Michigan, November 2011

American Mathematical Society Western Section Meeting, Special Session on Algebraic Geometry, University of Utah, October 2011

"Cox rings" Workshop, Universität Tübingen, July 2011

Algebraic Geometry Workshop "Seminario di Natale", Universitá di Milano, December 2010

"Compact Moduli and Vector Bundles" Conference, University of Georgia, October 2010

"Moduli and birational geometry" Workshop, Pohang University of Science and Technology, Pohang, Korea, August 2010

Institute of Mathematics of Polish Academy of Sciences Summer School on Algebraic Geometry, Banach Center, Bedlewo, Poland, July 2010

Algebraic Geometry Northeastern Series (AGNES), SUNY Stony Brook, November 2009

"Cox rings" Workshop, Universität Tübingen, July 2009

"Spaces of curves and their interaction with diophantine problems" Conference, Columbia University, June 2009

Western Algebraic Geometry Seminar (WAGS), University of California Berkeley, April 2009

American Mathematical Society/Sociedade Brasileira de Matematica First Joint Meeting, IMPA, Rio de Janeiro, Brazil, June 2008

International Congress of Mathematicians Satellite Conference in Algebraic Geometry, Segovia, August 2006

"Algebraic vector bundles" Workshop, Westfälische Wilhelms-Universität Münster, June 2006

BIRS Workshop "Recent trends in higher dimensional algebraic geometry", Banff, Canada, April 2006

American Mathematical Society Summer Institute in Algebraic Geometry, University of Washington, Seattle, August 2005

"Texas Algebraic Geometry Seminar", Rice University, May 2005

American Mathematical Society/Sociedad Matematica Mexicana 6th Joint Meeting, Houston, May 2004

"Vector bundles on algebraic curves" Conference, Universidade do Porto, Porto, July 2003

"Curves and their moduli" Conference, University of Michigan, February 2002

"Higher dimensional varieties and rational points" Conference, Alfréd Rényi Institute of Mathematics, Budapest, September 2001

colloquia & seminar talks		
	2019	Université de Lille, Université Paris-Sud, Pontificia Universidad Católica de Chile
	2018	University of Michigan, Rutgers University, Institut de mathématiques de Jussieu, Université de Lorraine, Humboldt Universität
	2017	Institut des Hautes Études Scientifiques, Institut de mathématiques de Jussieu, Columbia University, Università degli Studi di Roma Tor Vergata
	2016	IMPA (Brazil), Yale University
	2015	University of Minnesota
	2014	Northeastern University (*colloquium*), Universität Bonn, Leibniz Universität Hannover, Institut de mathématiques de Jussieu, Università degli Studi Roma Tre, Università degli Studi di Torino, SUNY Stony Brook, Rio de Janeiro Colloquium on Algebraic and Arithmetic Geometry (IMPA, Brazil)

2012	University of British Columbia, IMPA (Brazil), SUNY Stony Brook, University of Maryland
2011	The Ohio State University (*colloquium*), University of Wisconsin-Madison (*colloquium*), Colorado State University (*colloquium*), University of Minnesota (*colloquium*), Max-Planck Institut Bonn, Universität des Saarlandes
2010	University of Wisconsin-Madison, Korea Institute for Advanced Study, Colorado State University, IMPA (Brazil)
2009	University of Utah, San Francisco State University, Humboldt Universität, University of Freiburg
2008	University of Pennsylvania, IMPA (Brazil), Max-Planck Institut Bonn, Humboldt Universität, University of Illinois at Chicago, University of Georgia, University of California at San Diego
2007	SUNY Buffalo (*colloquium*), Wesleyan University (*colloquium*), University of Missouri St. Louis (*colloquium*), University of Arizona, University of California Berkeley, Humboldt Universität, Rice University
2006	Harvard University, Princeton University, University of Massachusetts Amherst
2004	Institut des Hautes Études Scientifiques
2003	Max-Planck Institut Bonn
2002	Princeton University, Rice University, University of Pennsylvania, University of Texas at Austin

lectures for graduate students

Women in Algebraic Geometry Collaborative Research Workshop, ICERM, Brown University, July 2020

"Del Pezzo surfaces and Fano varieties" Conference (3 lectures), Düsseldorf, July 2019

"Varieties and Group Actions" Workshop (3 lectures), Banach Center, Warsaw, September 2018

"Geometry at the ANU" Graduate Student Workshop (3 lectures), Australian National University, Canberra, August 2016

"New methods in birational geometry" Summer School (4 lectures), Université de Toulouse, June 2016

Graduate Mini-School for Algebraic Geometry Northeastern Series, Boston College, Spring 2015

"Invitation to Mathematics" Lecture Series (2 lectures), The Ohio State University, Spring 2012

"Arithmetic aspects of rational curves" Summer School in Mathematics (2 lectures), Institut Fourier, Grenoble, June 2010

conference organization

AMS Spring Eastern Sectional Meeting, Special Session on Algebraic Geometry, Northeastern University, April 2018 (with E. Macrì, B. Schmidt and X. Zhao)

Algebraic Geometry Northeastern Series (AGNES), Northeastern University, Fall 2017 (with A. Marian and E. Macrì)

ICERM Workshop "Cycles on Moduli Spaces, Geometric Invariant Theory, and Dynamics", Brown University, August 2016 (with D. Chen, M. Fedorchuk and A. Zorich)

"II Latin American School of Algebraic Geometry and Applications", Cabo Frio, Brazil, June 2015 (with C. Araujo, L. Brambila-Paz, C. Casagrande and S. Druel)

BC-Northeastern Algebraic Geometry Conference, April 2015, September 2015, April 2016, October 2016, March 2017, October (with D. Chen, M. Fedorchuk, B. Lehmann, E. Macrì and A. Marian)

OSU/UIC/UM Algebraic Geometry Workshop, The Ohio State University, March 2012, April 2014 (with M. Caibăr, H. Clemens, G. Kennedy, E. Macrì and H. Tseng)

"Hodge Theory and Classical Algebraic Geometry" Conference, The Ohio State University, May 2013 (with M. Caibăr, G. Kennedy, and E. Macrì)

AMS Central Fall Section Meeting, Special Session on Algebraic Geometry, University of Akron, October 2012 (with E. Macrì and H. Tseng)

Western Algebraic Geometry Seminar (WAGS), University of Arizona, November 2010 (with Y. Hu and K. Joshi)

Mini-courses et seminar organization	Francois Charles (Université Paris-Sud), Algebraic cycles and Arakelov geometry (3 lectures) Northeastern University, 10/2017
	Alex Küronya (Goethe-Universität Frankfurt), Geometric aspects of Newton-Okounkov bodies (4 lectures) Northeastern University, 03/2018
	Sam Grushevsky (SUNY Stony Brook), Mirzakhani's recursion for Weil-Petersson volumes of moduli spaces (3 lectures) Northeastern University, 04/2018
	"Geometry, Algebra, Singularities and Combinatorics" Seminar, Northeastern University, 2015–2018
	Algebraic Geometry Seminar, The Ohio State University, 2013
	Algebraic Geometry Seminar, University of Arizona (Fall 2008, Fall 2009, Fall 2010), The Ohio State University (Spring 2013)
	Graduate student reading seminars in Algebraic Geometry (Toric Geometry, Intersection Theory, Hodge Theory), The Ohio State University, 2011–2014
outreach activities	Interview for the August/September 2016 issue of Girls' Angle magazine
	Talk in the Undergraduate Math Club, Northeastern University, Spring 2015
	Panelist for "Sonia Kovalevskaya High School Mathematics day", University of Arizona, 2010, 2011
supervising & mentoring	Ph.D. students: Zhuang He and Lei Yang, Northeastern University (2015–present)
	Superviser M2 Master dissertation: Raphaël Ruimy (École Normale Supérieure), 2019
	Superviser M1 Master project (3 students), Université de Versailles, Spring 2019
	REU, Alex Elchesen, The Ohio State University, Fall 2014
	Independent Study in Algebraic Geometry, Enrique Acosta, University of Arizona, Fall 2009
	Independent Study in Algebra, Geillan Ally, University of Arizona, Fall 2008

teaching	2018–present	Instructor, Université de Versailles

- Commutative Algebra, M1 Master course, Spring 2019, Spring 2020
- Differential aspects, L2 course, Spring 2019, Spring 2020
- Number Theory, M1 Master course, Fall 2018, Fall 2019
- General Mathematics for Biologists, L1 course, Fall 2018, Fall 2019

	2015–2018	Instructor, Northeastern University

- Graduate Seminar in Representation Theory and Algebraic Geometry (Mapping Class Groups and Teichmüller Theory), Spring 2018
- Group Theory, Fall 2017 (2 sections), Fall 2016, Fall 2015
- Calculus for Science and Engineering I, Fall 2015

	2011–2014	Instructor, The Ohio State University

- Linear Algebra, Fall 2014
- Abstract Algebra II, Fall 2014, Spring 2014 (2 sections)
- Topics in Algebraic Geometry (Curves and Surfaces, with E. Macrì and H.-H. Tseng), Fall 2012
- Graduate Abstract Algebra I, Fall 2012
- Discrete Structures II, Spring 2012, Winter 2012
- Algebraic Geometry I, Autumn 2011

	2008–2011	Instructor, University of Arizona

- Calculus II, Spring 2011
- Graduate Algebra, Spring 2011, Fall 2010
- Topics in Geometry and Topology (Moduli of Curves), Spring 2010
- Introduction to Abstract Algebra II, Spring 2010
- Introduction to Abstract Algebra I, Fall 2009
- Vector Calculus (2 sections), Fall 2008
- Commutative Algebra, Spring 2008

	2006–2007	Instructor, University of Massachusetts Amherst

- Calculus I (2 sections), Fall 2007, Spring 2007, Fall 2006
- Linear Algebra, Spring 2007

	2003–2006	Instructor, University of Texas at Austin

- Introduction to Number Theory, Summer 2006
- Calculus I, Spring 2006
- Discrete Mathematics, Spring 2006, Spring 2005, Fall 2004, Spring 2004, Fall 2003
- Introduction to Linear Algebra, Fall 2005, Spring 2005, Spring 2004
- Algebraic Geometry II, Fall 2005
- Differential Equations, Fall 2004
- Vector Calculus, Fall 2003

1998–2002		Teaching Assistant, Massachusetts Institute of Technology

- Algebraic Geometry I (Grader), Fall 2001, Fall 1999
- Algebraic Geometry II (Grader), Spring 2000
- Topics in Algebraic Geometry (Grader), Fall 2000
- Linear Algebra (Instructor), Summer 1999
- Vector Calculus (TA), Spring 1999
- Commutative Algebra (Grader), Fall 1998
- Algebraic Topology (Grader), Spring 1998

committee work   thesis defense   Barbara Bolognese (Northeastern University, Spring 2016), Xun Yu (The Ohio State University, Spring 2013), Edilaine Ervilha Nobili (IMPA, Brazil, Spring 2012), Yijun Shao (University of Arizona, Fall 2010), Thomas Occhipinti (University of Arizona, Spring 2010), Adam Parker (University of Texas at Austin, Spring 2005)

oral exam   The Ohio State University: Fenglong You (October 2014), Qing (Chaney) Zhang (December 2012), Rudy Perkins (February 2012), Qing Zhang (February 2012); University of Arizona: Alex Petrov (November 2009), Enrique Acosta (December 2010)

department   Université de Versailles

- Coordinator Master M1 in Applied Algebra, 2018– present

Northeastern University

- Postdoctoral Hiring Committee, 2017–2018
- Advanced Curriculum Committee chair, 2017–2018
- Core Curriculum Committee, 2017–2018
- Graduate Committee, 2015–2017

The Ohio State University

- Committee for the Evaluation of Non-Tenured Faculty, 2014
- Graduate student recruitment, 2013, 2014
- Colloquium co-Chair, 2012–2013

University of Arizona

- Colloquium co-Chair, 2008–2009

university   Northeastern University

- Reviewer for the New England Future Faculty Workshop for Women in STEM, Summer 2017

The Ohio State University

- Graduate Faculty Representative for the thesis defense of Zhenwei Huang, School of Earth Sciences, Spring 2013

national   Member in the Hiring Committee for a Maître de Conférence position, Université Paris-Sud (Spring 2019), Université de Lorraine (Spring 2019)

service	editorial	Co-editor for the 2013 "Hodge Theory and Classical Algebraic Geometry" conference proceedings (with M. Caibăr, H. Clemens, G. Kennedy, E. Macrì and H. Tseng), AMS 2015
	referee	Advances in Geometry, Advances in Mathematics, Compositio Mathematica, Duke Mathematical Journal, Geometriae Dedicata, International Mathematics Research Notices, Inventiones Mathematicae, Journal de mathématiques pures et appliquées, Journal für die reine und angewandte Mathematik, Journal of Algebra, Journal of Algebra and Number Theory, Journal of Algebraic Geometry, Journal of the American Mathematical Society, Journal of Combinatorial Theory, Journal of the London Mathematical Society, Journal of Pure and Applied Algebra, Mathematische Zeitschrift, Michigan Mathematical Journal, Proceedings of the American Mathematical Society, Proceedings of the London Mathematical Society, Transactions of the American Mathematical Society, conference proceedings
	grant reviewer	– National Science Foundation – National Security Agency – Natural Sciences and Engineering Research Council of Canada