

Curriculum vitae

Angela Ortega

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Personal Information

Birthday and place of birth: September 6th 1975, Monterrey, N.L., Mexico.

Academic Positions

- April 2009-:** Wissenschaftliche Mitarbeiterin, Institut für Mathematik, Humboldt Universität zu Berlin
- 2008-2009:** Wissenschaftliche Mitarbeiterin, Fachbereich Mathematik, Universität Duisburg-Essen
- 2006-2007:** Tenure-track Professor, Instituto de Física y Matemáticas, Universidad Michoacana, Morelia, Mexico
- 2004-2006:** Postdoc, Universidad Nacional Autónoma de Mexico (UNAM), Instituto de Matemáticas, Campus Morelia
- 2003-2004:** Attaché Temporaire à l'Enseignement et la Recherche, Université de Nice

Education

- 23.01.2013:** Habilitation, Humboldt Universität zu Berlin.
- 2000-2003:** Ph.D in Mathematics, Université de Nice (grade "très honorable") under the supervision of Prof. Arnaud Beauville
- 1999-2000:** D.E.A. (Diplôme d'Études Approfondies) in Mathematics, Université de Paris XI, Orsay
- 1996-1999:** Master in Mathematics, Centro de Investigación en Matemáticas (CIMAT), Guanajuato, Mexico
- 1992-1996:** Bachelor in Mathematics, Universidad de Nuevo León, Monterrey, Mexico

Publications and Preprints

1. *Variétés de Prym associées aux revêtements n -cycliques d'une courbe hyperelliptique*, Mathematische Zeitschrift **245** (2003), 97–103.
2. *On the moduli space of rank 3 vector bundles on a genus 2 curve and the Coble cubic*, Journal of Algebraic Geometry **14** (2005), 327–356.
3. *Prym–Tyurin varieties coming from correspondences with fixed points*, Journal of Algebra **311** (2007), 268–281.
4. *Brill-Noether bundles and coherent systems on special curves* (with L. Brambila-Paz), in: Moduli spaces and vector bundles, London Math. Soc. Lecture Notes **359**, Cambridge Univ. Press 2009, 456–472.
5. *Estabilidad de sistemas coherentes* (with L. Brambila-Paz), Aportaciones Matematicas Soc. Mat. Mexicana **40** (2009), 15–26.
6. *Prym varieties of cyclic coverings* (with H. Lange), Geometriae Dedicata **150** (2011), 391–403.
7. *Prym varieties of triple coverings* (with H. Lange), International Mathematical Research Notices **22** (2011), 5045–5075.
8. *The maximal rank conjecture and rank two Brill-Noether theory* (with G. Farkas), Pure and Applied Mathematics Quarterly **7** (2011), 1265–1296.
9. *Higher rank Brill-Noether theory on sections of $K3$ surfaces* (with G. Farkas), International Journal of Mathematics **23** (2012), 1250075.
10. *The Brill-Noether curve and Prym–Tyurin varieties*, Mathematische Annalen **356**, No. 3 (2013), 809–817.
11. *Compactification of the Prym map for non cyclic triple coverings* (with H. Lange), International Journal of Mathematics **24**, No. 3 (2013), 1350015.
12. *Log canonical models of the moduli space of spin curves of genus 2* (with H. Lange), J. London Math. Soc. **90**, No.3 (2014), 763–784.
13. *The minimal resolution conjecture and Ulrich bundles* (with M. Aprodu and G. Farkas), to appear in Journal für die reine und angewandte Mathematik. ArXiv: math.AG/1212.6248.
14. *Stability of restricted Lazarsfeld–Mukai bundles and canonical curves* (with M. Aprodu and G. Farkas), to appear in Advanced Studies in Pure Mathematics (Math. Soc. Japan) on the occasion of Mukai's 60th birthday.
15. *The Prym map of degree-7 cyclic coverings* (with H. Lange). ArXiv:math.AG/1501.07511
16. *Tensor product of coherent systems* (with L. Brambila-Paz). ArXiv:math.AG/0711.3944.

Academic visits

15.02.– 15.04.2015	Warwick University
15.09.– 30.09.2013	Università di Roma 3
03.03.– 15.03.2013	KAIST, Daejeon, Korea
14.02.– 26.03.2011	Isaac Newton Institute, Cambridge, UK
01.03.– 28.03.2010	University of Georgia, Athens, USA
02.03.– 14.03.2009	Centro de Investigación en Matemáticas, Guanajuato
10.01.– 10.02.2007	Universität Erlangen-Nürnberg
25.07.– 13.08.2005	University of Liverpool

Awards and Grants

- Principal Investigator in the IRTG 1800, *Moduli and Automorphic Forms*, Berlin-Amsterdam-Leiden, 2012-2016
- 2007–2010: National Council of Science and Technology (CONACyT), research grant 61011 *Haces Vectoriales sobre curvas algebraicas y variedades de Prym*, Mexico
- 2007–2008: Professorship Improvement Program (PROMEP), fellowship and research grant, Mexico
- 2006–2008: Member of the National Research System (SNI), Mexico
- June 1998: Acknowledgement to the best average grade (promotion 96-98), CIMAT, Mexico

Professional Activities

- Principal Investigator in the IRTG 1800, *Moduli and Automorphic Forms*, Berlin-Amsterdam-Leiden, 2012-2016
- Member of the SFB 647, *Raum - Zeit - Materie*, 2009-2016
- Faculty member of the *Berlin Mathematical School*, 2009-2016
- Group Mentor in the Summer School for high school students, *Lust auf Mathematik*, Jungenbildungszentrum Blossin, June 2013
- Invited lecturer, *Summer School in Algorithmic Mathematics* of the DFG Priority Program 1489, Munich, August 2012
- Invited lecturer, *VIGRE 2012 Summer School on Algebraic Geometry*, University of Georgia, Athens May 2012
- Invited lecturer, *Elliptic curves and Cryptography* at the VIII School on Algebraic Geometry, Universidad de Guanajuato, August 2007
- Invited lecturer, *Projective Geometry*, VII Summer School, Instituto de Matemáticas, UNAM, August 2006
- Invited lecturer, *Elliptic curves and applications*, Second School on Geometry and Dynamics, Universidad de Tabasco, January 2006
- Invited lecturer, *Introduction the vector bundles*, VII School on Algebraic Geometry, CIMAT, May 2005

- Reviewer of the PhD Thesis *Modulräume trivial gerahmter und multigerahmter Garben auf Flächen und höherdimensionalen Varietäten und deren mögliche Anwendung auf affine Klassifikationsprobleme* by Olaf Teschke (HU), advisor: Prof. Herbert Kurke.
- I have refereed numerous papers for a variety of journals including the American Journal of Mathematics, Geometry and Topology, Journal of the London Mathematical Society, Kyoto Journal of Mathematics, International Mathematical Research Notices, Geometriae Dedicata and Journal of Pure and Applied Algebra.

Supervised Theses

- PhD Thesis *Stability conditions of coherent systems on curves* by Osbaldo Mata Gutiérrez (UNAM), co-advised with Leticia Brambila, defended in November 2010
- PhD Thesis *The Maximal Rank Conjecture* by Irfan Kadiköylü (HU), supported by BMS, expected defense 2016
- PhD Thesis *A stratification of the moduli space of curves* by Ignacio Barros (HU), co-advised with Gavril Farkas, supported by BMS, expected defense 2017
- Diploma Thesis *Nicht-freie projektive Moduln über Gruppenringen torsionsfreier Gruppen* by Jacqueline Rosar, defended in January 2014
- Diploma Thesis *Die Vermutung von Serre über projektive Moduln* by Marlene Kretschmer, defended in January 2014
- Master Thesis *Die Catalansche Vermutung* by Robert Buge defended in September 2013
- Bachelor Thesis *Primzahltests im Vergleich* by Christian Piesk, defended in December 2013
- Bachelor Thesis *Die historische Herleitung der Lösungsformel für kubische und quartische Polynomgleichungen* by Katrin Schmidt, defended in April 2014
- Bachelor Thesis *Elliptische Kurven in der Kryptographie* by Jennifer Stier, expected defense in Februar 2015
- Master Thesis *Darstellungstheorie der symmetrischen Gruppe S_n* by Christian Piesk, expected defense in May 2015
- Master Thesis *Reziprozitätsgesetze* by Julia Oteiza, expected defense in May 2015

Organization of conferences

- Conference *Moduli and Automorphic Forms: a meeting for young women in mathematics*, Humboldt Universität zu Berlin, May 2014
- North German Algebraic Geometry Seminar, Humboldt Universität zu Berlin, May 2011 and November 2013
- Conference *Geometry and Topology of Moduli* (co-organized with Gavril Farkas), Humboldt Universität zu Berlin, October 2012
- Conference *Vector Bundles 2006* in honor of Peter Newstead, CIMAT, Mexico, December 2006

- Algebraic Geometry Seminar Guanajuato-Morelia, 2004-2006, Mexico

Selected Talks

- February 2015 *Prym-Tyurin varieties and the Brill-Noether curve*, algebraic Geometry Seminar, Università di Roma I (Sapienza)
- February 2015 *Stability of restricted Lazarsfeld-Mukai bundles and canonical curves*, “Moduli spaces and derived categories”, University of Warwick
- December 2015 *Describiendo variedades abelianas de dimensión 6*, 2nd. Meeting of Mexican Mathematicians in the World, CIMAT, Guanajuato
- November 2014 *Higher rank Brill-Noether theory on sections of K3 surfaces*, Workshop on Algebraic Geometry, Chinese Academy of Sciences, Beijing
- September 2014 *Log canonical models of the moduli of genus 2 curves*, Algebraic Geometry Seminar, Università di Roma 3
- February 2014, *Minimal Resolutions*, Workshop, Vietnam Institute for Advanced Study in Mathematics, Hanoi
- December 2013, *Prym-Tyurin varieties*, Colloquium, Universiteit van Amsterdam
- September 2013, *Prym of non-cyclic triple covers and log canonical models of the spin moduli space of genus 2*, Algebraic Geometry Seminar, Università di Roma 3
- June 2013, *The minimal resolution conjecture for curves*, Workshop “Recent trends on moduli spaces of curves”, Università di Trieste - SISSA
- March 2013, *Jacobians as Prym-Tyurin varieties*, Workshop on Projective Algebraic Geometry and Moduli, Jeonju, Korea
- March 2013, *Ulrich bundles on K3 surfaces*, Algebraic Geometry Seminar, Università di Pavia
- October 2012, *Géométrie de l'espace des modules de fibrés vectoriels de rang 3*, Rencontres de Géométrie Algébrique, Université de Toulouse
- October 2012, *The Brill-Noether curve and applications to Prym-Tyurin varieties*, Algebraic Geometry Seminar, Universität Bayreuth
- May 2012, *The Brill-Noether curve and Prym-Tyurin varieties*, Georgia Algebraic Geometry Symposium on the occasion of Robert Varley’s 60th birthday, Athens, USA
- February 2012, *The compactified Prym map*, Algebraic Geometry Seminar, Università di Pavia
- March 2012, *Rank 2 Brill-Noether theory and Mercat’s conjecture*, Algebraic Geometry Seminar, Institute of the Romanian Academy, Bucharest
- December 2011, *Admissible S_3 -coverings*, Algebraic Geom. Seminar, Università di Roma 3
- November 2011, *Mercat’s conjecture*, Brill-Noether Day, FU Berlin
- November 2011, *Higher Brill-Noether theory on sections of K3 surfaces*, Algebraic Geometry Seminar, Università di Roma 2 (Tor Vergata)

- September 2011, *Prym varieties of étale non-cyclic triple coverings*, Oberwolfach workshop “Complex Algebraic Geometry”
- September 2011, *Exotic Prym varieties*, Algebraic Geometry Seminar, Universität Mainz
- May 2011, *Compactification de l’application de Prym*, Séminaire de Géométrie Algébrique, Université de Lille
- May 2011, *Pryms in Algebraic Geometry*, BMS Women in Mathematics, Berlin
- February 2011, *Compactification of the Prym map for triple coverings*, Newton Institute, Cambridge UK
- January 2010, *Variétés de Prym d’un revêtement triple non-cyclique*, Séminaire d’Arithmétique et Théorie de l’Information, Université de Marseille
- March 2010, *Prym varieties and their moduli*, Algebraic Geometry Seminar, University of Georgia in Athens
- March 2010, *Exotic Pryms of small dimension*, SUNY Stony-Brook, USA
- November 2009, *Prym varieties of triple étale non-cyclic coverings*, North German Algebraic Geometry Seminar, FU Berlin
- May 2009, *Moduli spaces of coherent systems*, Romanian-German Symposium on Mathematics and its Applications, Sibiu
- April 2009, *Systèmes Cohérents en Géométrie Algébrique*, Algebraic Geometry Seminar, Université de Grenoble
- November 2008, *Existence results on moduli spaces of coherent systems*, Oberseminar, Universität Duisburg-Essen
- January 2008, *Dolgachev’s conjecture on the moduli space of rank 3 vector bundles*, Emmy Noether Seminar, Universität Erlangen-Nürnberg
- October 2007, *Vector bundles and theta functions* invited speaker, XL Congress of the Mexican Mathematical Society, México
- May 2007, *Coherent systems over special curves*, invited speaker, Joint Meeting AMS-SMM, Zacatecas
- February 2007, *Moduli space of vector bundles of rank 3 and the Coble cubic*, Algebraic Geometry Seminar, Tufts University, Boston
- February 2007, *The theta map on the moduli space of vector bundles*, Algebraic Geometry Seminar, Texas A&M University
- February 2007, *Dolgachev’s conjecture on the moduli space of rank 3 vector bundles*, Algebraic Geometry Seminar, University of Texas at Austin
- January 2007, *Theta map and Coble hypersurfaces*, Algebraic Geometry Seminar, IMPA, Rio de Janeiro
- December 2006, *Moduli space of vector bundles of rank 3 and the Coble cubic*, Conference on Vector Bundles VBAC 2006, Guanajuato
- August 2005, *Prym-Tyurin Varieties*, Conference on Vector Bundles, University of Liverpool

- October 2004, *Decomposition of Prym varieties in product of Jacobians*, Colloquium, Instituto de Matemáticas, UNAM
- December 2003, *On the moduli space of rank 3 bundles and the Coble cubic*, “Géométrie Algébrique Complexe” 2003, CIRM, Luminy
- May 2002, *Variétés de Prym associées aux revêtements n -cycliques d’une courbe hyperelliptique*, Université de Nice
- October 1994, *The plane crystallographic groups*, Colloquium SCIENTIA, Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM)

Teaching Experience

- Winter 2014/15 Course *Algebra II*, Humboldt Universität
- Summer 2014 Course *Representation Theory*, Humboldt Universität
- Winter 2013/14, Course *Intersection Theory in Algebraic Geometry*, Humboldt Universität
- Winter 2012/13, Course *Algebra und Funktionentheorie*, Humboldt Universität, Vertretung von Prof. Dr. Jochen Brüning
- Summer 2010, Course *Abelian varieties*, Humboldt Universität
- 2009–2012 Various exercise sessions of *Lineare Algebra und Analytische Geometrie I und II*, *Algebra und Zahlentheorie*, Humboldt Universität
- 2006–2007, Courses *Geometría Algebraica*, *Análisis Real*, *Algebra Lineal I y II*, Universidad Michoacana
- 2006, Courses *Algebra Conmutativa*, *Geometría Algebraica*, Universidad Nacional Autónoma de México
- Spring 2005, Course *Introducción a la Geometría Algebraica*, Universidad Michoacana
- 2002–2004 Exercise sessions of *Algèbre I*, *Mathématiques Sciences de la Vie*, Université de Nice

Languages

Spanish (mother language), English, French, German.

Berlin, January 2015.