

Marco Flores

Curriculum Vitae

Humboldt Universität zu Berlin
Institut für Mathematik
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Employment

2020 - Scientific assistant, Humboldt Universität zu Berlin

Education

2020 - PhD in Mathematics, Humboldt Universität zu Berlin

2017 - 2019 MSc in Mathematics, Freie Universität Berlin

2012 - 2017 BSc in Mathematics, CIMAT - Universidad de Guanajuato

Teaching assistanships

Winter 22/23 Algebra and complex analysis, HU Berlin

Summer 2022 Linear Algebra II, HU Berlin

Winter 21/22 Linear Algebra I, HU Berlin

Summer 2021 Analysis for computer science, HU Berlin

Winter 20/21 Algebra and complex analysis, HU Berlin

Jan-Jun 2016 Commutative algebra, Universidad de Guanajuato

Aug-Dec 2015 Topology, Universidad de Guanajuato

Jan-Jun 2015 Algebra, Universidad de Guanajuato

Student seminar organization

Winter 22/23 Deligne-Mumford Stacks, HU Berlin

Summer 2020 Intersection theory, HU Berlin

Winter 19/20 Abelian varieties, HU Berlin

Summer 2019 Modular forms, HU Berlin

Conferences, workshops and research visits

- Feb 2023 Northern German Algebraic Geometry Seminar, Berlin, Germany
- Sep 2022 Intercity Seminar on Arakelov Geometry, ICMAT, Madrid, Spain
- Nov 2019 Workshop on Brill-Noether Theory, Berlin, Germany
- Nov 2018 Chow Lectures by Peter Scholze, Max Planck Institute, Leipzig, Germany
- Jun 2018 Homotopy Theory Summer Conference, Berlin, Germany
- Aug 2017 3rd Latinamerican School on Algebraic Geometry, CIMAT, Guanajuato, Mexico
- Feb 2017 BMS Days and Student Conference, Berlin, Germany
- Dec 2016 Workshop on Algebraic Geometry, CCM UNAM, Morelia, Mexico
- Oct 2016 49th Congress of the Mexican Mathematical Society, Aqs, Mexico
- Jul-Aug 2016 Undergraduate Summer Research Program, Fields Institute, Toronto, Canada
- Feb 2016 CIMPA School on Moduli of Curves, CIMAT, Guanajuato, Mexico
- Dec 2015 Workshop on Algebraic Geometry, CCM UNAM, Morelia, Mexico
- Dec 2015 II School on topological data analysis, Querétaro, Mexico
- Oct 2015 48th Congress of the Mexican Mathematical Society, Hermosillo, Mexico
- Jun 2015 XI Escuela de Matemáticas de Latinoamérica y el Caribe, Puebla, Mexico
- Dec 2014 School on knots and 3-manifolds, CIMAT, Guanajuato, Mexico
- Jul 2013 International Mathematics Summer School for Students, Bremen, Germany

Research talks

- Sep 2022 ICMAT Madrid: *A cohomological approach to formal Fourier-Jacobi series*
- Dec 2021 Berlin Mathematical School: *What is... a Modular Curve?* (online)
- Oct 2020 UNAM: *El teorema de Bruinier-Raum, pero cohomológico y aritmético* (en línea)
- May 2020 HU Berlin: *Rational Equivalence of Divisors*
- May 2020 U. de Guanajuato: *Cohomología de Variedades Tóricas* (online)
- Jan 2020 HU Berlin: *The Picard Scheme*
- Nov 2019 HU Berlin: *Cohomological dimension of projective schemes in pro-p towers*
- May 2019 HU Berlin: *Compactly supported direct images of Frobenius Modules*
- Apr 2019 HU Berlin: *Modular Forms and Congruence Subgroups*
- Sep 2018 U. de Guanajuato: *Kummer vs Fermat: el álgebra hasta sus últimas consecuencias*
- May 2018 FU Berlin: *Homotopy theoretic interpretation of vector bundles*
- Jun 2017 CIMAT Guanajuato: *Curvas algebraicas y configuraciones de puntos en \mathbb{P}^1*
- May 2017 U. de Guanajuato: *Curvas elípticas y configuraciones de puntos*
- Mar 2017 UNAM Oaxaca: *Representaciones de $SL(4, \mathbb{C})$*
- Oct 2016 49 Congreso Nacional de la SMM: *Convexidad en cierto espacio de Teichmüller*
- Oct 2015 48 Congreso Nacional de la SMM: *Propiedades locales de curvas algebraicas planas*

Publications

- 2018 *Toy Teichmüller spaces of real dimension 2: the pentagon and the punctured triangle*, *Geom. Dedicata* 197 (2018), 193-227
- 2015 *Triángulos Semejantes*, *Tzaloa Magazine of the Mexican Mathematical Olympiad*, third issue, year 2015. (science popularization)

Scholarships

- 2017-2019 For Master studies by the Berlin Mathematical School
- 2016-2017 For Bachelor thesis project by UNAM
- 2012-2017 For undergraduate studies by CONACyT-CIMAT
- 2012-2017 For undergraduate studies by TELMEX
- 2012 PRONABES scholarship for undergraduate studies by the Mexican government

Awards and Honours

- 2018 Honourable Mention, Sotero Prieto Prize for best Bachelor thesis, awarded by the Mexican Mathematical Society
- 2015 Excelency Medal, awarded by Universidad de Guanajuato for obtaining the highest grades among mathematics students during the year
- 2011 Gold Medal, 25th National Mexican Mathematical Olympiad
- 2010 Silver Medal, 24th National Mexican Mathematical Olympiad

Service

- 2018 Co-organizer of the What is..? seminar of the Berlin Mathematical School
- 2015 - 2016 President of the Students Society of the Mathematics Department, U Guanajuato
- 2015-2016 Coach for the state of Jalisco at the 29th and 30th Mexican Mathematical Olympiad
- 2014-2016 Head organizer of the Mathematics Junior Seminar at U Guanajuato
- 2014-2015 Coach for the National Mexican team in route to the 17th and 18th Central American and Caribbean Mathematical Olympiad
- 2012-2013 Coach for the state of Guanajuato at the 26th and 27th Mexican Mathematical Olympiad
- Aug 2013 Local staff at the 1st Mathematical Congress of the Americas

Languages

- Spanish Native
- English Fluent
- German Working proficiency