

CONTACT INFORMATION

Professional address: Department de Matemàtiques i Informàtica, Universitat de Barcelona,
Gran Via de les Corts Catalanes, 585; 08007 Barcelona, Spain.

EDUCATION

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| 09/2016 - (08/2019) | Ph.D. in Mathematics.
Center: <i>Universitat de Barcelona</i> .
City, Country: Barcelona, Spain.
Advisor: Carlos D'Andrea. |
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| 09/2015 - 08/2016 | Postgraduate Diploma Programme in Mathematics.
Center: <i>Abdus Salam International Centre for Theoretical Physics (ICTP)</i> .
City, Country: Trieste, Italy.
Description: An intense, pre-PhD programme (diploma.ictp.it).
Thesis Title: "Syzygies".
Advisor: Lothar Göttsche. |
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| 09/2009 - 07/2014 | Bachelor in Computer Science.
Center: <i>Universidad Central "Marta Abreu" de las Villas (UCLV)</i> .
City, Country: Santa Clara, Cuba.
Thesis Title: "Cryptographic algorithm based on group presentations".
Specialization: with a special syllabus corresponding to Mathematics.
Advisor: Eberto Morgado.
Final Cumulative Grade: Gold title, 7.51 (over a maximum of 5). |

WORK EXPERIENCE

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| 09/2016 - Present | Center: <i>Universitat de Barcelona</i> .
Position: Researcher & PhD candidate in the ARCADES network
(http://arcades-network.eu) under the Marie Skłodowska-Curie grant
agreement No 675789. |
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| 09/2014 - 07/2015 | Center: <i>Universidad Central "Marta Abreu" de las Villas</i> .
Position: Graduate Teaching Assistant in the Department of Mathematics. |

PUBLICATIONS & PREPRINTS

- "Bounding the degrees of a minimal μ -basis for a rational surface parametrization", arXiv:1611.07506.
- "A D -module approach on the equations of the Rees algebra", arXiv:1706.06215.
- "Regularity and Gröbner bases of the Rees algebra of edge ideals of bipartite graphs", to appear in Le Matematiche, arXiv:1801.06731.
- (with Sepehr Jafari, Beatrice Picone and Navid Nemati), "Regularity of bicyclic graphs and their powers", arXiv:1802.07202.
- (with Laurent Busé and Carlos D'Andrea), "Degree and birationality of multi-graded rational maps", arXiv:1805.05180.

AWARDS & DISTINCTIONS

- Winner of the top student prize in Mathematics in ICTP, 2016.
- One of the 10 selected students in the Postgraduate Diploma Programme in Mathematics in ICTP, 2015.
- Best graduate student in 2014 in the Universidad Central "Marta Abreu" de Las Villas, 2014.

- SILVER MEDAL in the XV Iberoamerican Mathematical Olympiad, 2012.
- BRONZE MEDAL in the XIII Iberoamerican Mathematical Olympiad, 2010.
- GOLD MEDAL in the 11th Cuban Mathematical Olympiad, 2012.
- GOLD MEDAL in the 12th Cuban Mathematical Olympiad, 2013.
- HONORABLE MENTION in the 13th Cuban Mathematical Olympiad, 2014.
- BRONZE MEDAL in the Caribbean Regional Final of the Latin American programming ACM-ICPC, 2012.
- HONORABLE MENTION in the Caribbean Regional Final of the Latin American programming ACM-ICPC, 2011
- HONORABLE MENTION in the Caribbean Regional Final of the Latin American programming ACM-ICPC, 2013.

RESEARCH VISITS

- INRIA Sophia Antipolis, 6 months, 10/2017 - 03/2018, mentor: Lurent Busé.

FELLOWSHIPS

- 09/2016 - 08/2019: Marie Skłodowska-Curie Fellowship, Universitat de Barcelona, Barcelona, Spain.
- 09/2015 - 08/2016: Awarded a fully funded scholarship to pursue the Postgraduate Diploma in Mathematics at ICTP, Trieste, Italy.

INVITED TALKS

- “*Regularity of bicyclic graphs and their powers*”, IPPI Workshop 2018 (post-Pragmatic 2017 event), Turin, Italy, March 2018.
- “*Regularity and Gröbner bases of the Rees algebra of edge ideals of bipartite graphs*”, Journées Nationales de Calcul Formel, CIRM, Luminy, France, January 2018.
- “*A D -module approach on the equations of the Rees algebra*”, Séminaire d’algèbre, topologie et géométrie, University of Nice, France, November 2017.
- “*Bounding the degrees of a minimal μ -basis for a rational surface parametrization*”, Society for Industrial and Applied Mathematics, Applied Algebraic Geometry Conference, Atlanta, United States, August 2017.
- “*Bounding the degrees of a minimal μ -basis for a rational surface parametrization*”, Effective Methods in Algebraic Geometry MEGA 2017, Nice, France, June 2017.
- “*Bounding the degrees of a minimal μ -basis for a rational surface parametrization*”, Seminari de Geometria Algebraica de Barcelona, Barcelona, March 2017.

CONFERENCES & WORKSHOPS

- Workshop on Commutative Algebra, Syzygies and Singularities, Nice, France, December 2017.
- First Software & Industrial Workshop, and Midterm Review ARCADES, Athens, Greece, November 2017.
- Research school in Algebraic Geometry and Commutative Algebra, *Pragmatic 2017*, Catania, Italy, June 2017.
- Learning Week I in *Algebraic Representations in Computer-Aided Design for complex Shapes (ARCADES)*, Nice, France, March 2017.
- 1st Doctoral School ARCADES, Oslo, Norway, December 2016.
- Workshop in Algebra, Algebraic Geometry, Algebraic Topology and Applications sponsored by *Centro de Investigaciones en Matemáticas (CIMAT, Guanajato, México)* in Ciego de Avila, Cuba, 2014.

LANGUAGES

Spanish: Mother tongue.
English: Fluent.

COMPUTER SKILLS

C/C++, JAVA, \LaTeX , Linux, Wolfram Mathematica, MACAULAY2, SINGULAR.