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DANIEL
LABARDINI FRAGOSO
CURRICULUM VITAE

EDUCATION

- 2006 – 2010 Ph.D. in Mathematics.
Northeastern University (Boston, Massachusetts, USA).
Thesis: "Quivers with potentials associated with triangulations of Riemann surfaces".
Thesis Advisor: Prof. Dr. Andrei Zelevinsky.
Qualifying Exams: Algebra I, Algebra II, Analysis I, Topology.
GPA: 3.974 (Maximum possible: 4.000).
- 2004 – 2006 Master in Mathematical Sciences.
Instituto de Matemáticas, Universidad Nacional Autónoma de México.
Thesis: "Un par de técnicas combinatorias en teoría de representaciones de álgebras".
Thesis Advisor: Prof. Dr. Michael Barot.
Qualifying Exams: Álgebra Moderna, Topología Algebraica, Matemáticas Discretas.
GPA: 9.45 (Maximum possible: 10.00).
- 2000 – 2004 Bachelor's Degree in Matemáticas.
Facultad de Ciencias, Universidad Nacional Autónoma de México.
Thesis: "La latiz de caras de un cono de dimensión finita".
Thesis Advisor: Prof. Dr. Martha Takane Imay.
Summa Cum Laude in Thesis Defense.
Sotero Prieto Prize of the Mexican Mathematical Society to the best Undergraduate Thesis in Mathematics.
GPA: 9.96 (Maximum possible: 10.00).

EMPLOYMENT

- 2021-Present Full Time Researcher Level B, Tenured,
Instituto de Matemáticas, Universidad Nacional Autónoma de México.
- 2017 – 2021 Full Time Researcher Level A, Tenured,
Instituto de Matemáticas, Universidad Nacional Autónoma de México.
- 2017 – 2017 Full Time Researcher Level A, Tenure Track,
Instituto de Matemáticas, Universidad Nacional Autónoma de México.
- 2013 – 2017 Associate Researcher, Tenure Track,
Instituto de Matemáticas, Universidad Nacional Autónoma de México.
- 2011 – 2013 Postdoc (Wissenschaftlicher Mitarbeiter), *Mathematisches Institut, Universität Bonn.*
Mentor: Prof. Dr. Jan Schröer.
- 2006 – 2010 Research Assistant of Prof. Dr. Andrei Zelevinsky during the Summer Semesters,
Northeastern University.
- 2006 – 2010 Teaching Assistant, *Northeastern University.*
- 2002 – 2006 Teaching Assistant, *Facultad de Ciencias, Universidad Nacional Autónoma de México.*

RESEARCH INTERESTS

Cluster algebras, representation theory, Teichmüller theory, algebraic combinatorics, convex geometry.

GRANTS, AWARDS AND SCHOLARSHIPS

- Marcos Moshinsky Chair (*Cátedra Marcos Moshinsky*) of UNAM's Physics Institute and the Marcos Moshinsky Foundation. 2018–2020. Grant amount: approximately 20,000 Euros.
- “Álgebras de Caldero-Chapoton, relaciones de madeja y bases genéricas”, Research Grant *PAPIIT-IN112519* awarded by UNAM. 2019–2020. Grant amount: approximately 5,000 Euros.
- Level II National Researcher (*Investigador Nacional Nivel II*) at the Mexican National System of Researchers (Sistema Nacional de Investigadores) from January 2018 to December 2021.
- Level I National Researcher at the Mexican National System of Researchers from January 2015 to December 2017.
- “Carcajes y especies con potenciales, álgebras de superficies y teoría de Teichmüller: Teoría, algoritmos y visualización”, Research Grant *CONACyT-238754* awarded by the Mexican *Consejo Nacional de Ciencia y Tecnología*. 2015–2019. Category: Young Researcher. Grant amount: approximately 45,000 Euros.
- “Triangulaciones de superficies, álgebras Jacobianas y equivalencias derivadas”, Research Grant *PAPIIT-IA102215* awarded by UNAM. 2015–2017. Grant amount: approximately 5,000 Euros.
- Participation at the *Heidelberg Laureate Forum*, held by the *Heidelberg Laureate Forum Foundation*. Heidelberg, Germany. September 2014.
- Proposed by the Department of Mathematics of Northeastern University for inclusion in the list of Northeastern University's *Outstanding Graduate Students*. February 2013.
- *Scholarship for graduate studies abroad*, Consejo Nacional de Ciencia y Tecnología (CONACyT), México. 2010.
- Nomination, by Prof. Dr. Andrei Zelevinsky, to *Northeastern University's 2010 Outstanding Graduate Student Award in Research - Life Sciences, Physical Sciences, and Engineering*. 2010.
- *Graduate Assistantship*, Northeastern University, 2006 – 2010.
- *Sotero Prieto Prize* of the Mexican Mathematical Society to the best Undergraduate Thesis in Mathematics. Octubre 2004.
- *Summa Cum Laude* Summa Cum Laude in Undergraduate Thesis Defense. May 2004.
- *e-Siglo Scholarship for Undergraduate Studies*.

RESEARCH PUBLICATIONS

1. Quivers with potentials associated to triangulated surfaces.
Proceedings of the London Mathematical Society **98** (2009), No. 3, 797–839.
<http://arxiv.org/abs/0803.1328>
43 pages.
2. Cones and convex bodies with modular face lattices.
Coauthors: Max Neumann-Coto, Martha Takane Imay.
Proceedings of the American Mathematical Society **140** (2012), 4337–4350 .
<http://arxiv.org/abs/0903.0643>
14 pages.
3. Quivers with potentials associated to triangulated surfaces, part III: Tagged triangulations and cluster monomials.
Coauthor: Giovanni Cerulli Irelli.
Compositio Mathematica **148** (2012), No. 06, 1833–1866.
<http://arxiv.org/abs/1108.1774>
34 pages.

4. Linear independence of cluster monomials for skew-symmetric cluster algebras.
Coauthors: Giovanni Cerulli Irelli, Bernhard Keller, Pierre-Guy Plamondon.
Compositio Mathematica Vol. **149** (2013), No. 10, 1753–1764.
<http://arxiv.org/abs/1203.1307>
12 pages.
5. Strongly primitive species with potentials: aims and limitations.
Based on joint work with Andrei Zelevinsky.
European Mathematical Society, *Oberwolfach Reports* Vol. **10** (2013), No. 4, 3404–3407.
(Reporte No. 58/2013, DOI: 10.4171/OWR/2013/58).
4 pages.
6. Caldero-Chapoton algebras.
Coauthors: Giovanni Cerulli Irelli, Jan Schröer.
Transactions of the American Mathematical Society **367** (2015), 2787–2822.
DOI: <http://dx.doi.org/10.1090/S0002-9947-2014-06175-8>.
<http://arxiv.org/abs/1208.3310>
32 pages.
7. Strongly primitive species with potentials I: Mutations.
Coauthor: Andrei Zelevinsky.
Boletín de la Sociedad Matemática Mexicana (Tercera Serie), Vol. 22 (2016), Issue 1, 47–115.
DOI 10.1007/s40590-015-0063-9
<http://arxiv.org/abs/1306.3495>
69 pages.
8. On triangulations, quivers with potentials and mutations.
Contemporary Mathematics (American Mathematical Society), Vol. 657 “Mexican Mathematicians Abroad: Recent Contributions” (Bárcenas, Galaz-García, Moreno Rocha, Eds.), 2016. 103–127.
DOI: <http://dx.doi.org/10.1090/conm/657/13092>
<http://arxiv.org/abs/1302.1936>
25 pages.
9. Quivers with potentials associated to triangulated surfaces, part IV: Removing boundary assumptions.
Selecta Mathematica (New series), Vol. 22 (2016), Issue 1, 145–189.
DOI 10.1007/s00029-015-0188-8
<http://arxiv.org/abs/1206.1798>
45 pages.
10. The representation type of Jacobian algebras.
Coauthors: Christof Geiss, Jan Schröer.
Advances in Mathematics, Vol. 290 (2016), 364–452.
<http://arxiv.org/abs/1308.0478>
89 pages.
11. Species with potential arising from surfaces with orbifold points of order 2, Part I: One choice of weights.
Coauthor: Jan Geuenich.
Mathematische Zeitschrift, Vol. 286 (2017), Issue 3–4, 1065–1143. DOI:10.1007/s00209-016-1795-6.
<http://arxiv.org/abs/1507.04304>
79 pages.
12. On a family of Caldero-Chapoton algebras that have the Laurent phenomenon.
Coauthor: Diego Velasco.
Journal of algebra, Vol. 520 (2019), 90–135. <https://doi.org/10.1016/j.jalgebra.2018.11.012>
<https://arxiv.org/abs/1704.07921>
46 pages.

13. Species with potential arising from surfaces with orbifold points of order 2, Part II: arbitrary weights.
Coauthor: Jan Geuenich.
International Mathematics Research Notices, Vol. 2020 (2020), Issue 12, 3649–3752.
doi:10.1093/imrn/rny090
<https://arxiv.org/abs/1611.08301>
104 pages.
14. Derived invariants for surface cut algebras II: the punctured case.
Coauthors: Claire Amiot, Pierre-Guy Plamondon.
Communications in Algebra, 49 (2021):1, 114–150, DOI: 10.1080/00927872.2020.1797066
<http://arxiv.org/abs/1606.07364>
37 pages.
15. Schemes of modules over gentle algebras and laminations of surfaces.
Coauthors: Christof Geiss, Jan Schröer.
Selecta Mathematica (New series) 28, 8 (2022). <https://doi.org/10.1007/s00029-021-00710-w>
<https://arxiv.org/abs/2005.01073>
78 pages.
16. Derived categories of skew-gentle algebras and orbifolds.
Coauthors: Sibylle Schroll, Yadira Valdivieso.
Glasgow Mathematical Journal, Vol. 64 (2022), Issue 3, 649–674.
DOI: <https://doi.org/10.1017/S0017089521000422>
<https://arxiv.org/abs/2006.05836>
26 pages.
17. Quivers with potentials associated to triangulations of closed surfaces with at most two punctures.
Coauthors: Jan Geuenich, José Luis Miranda-Olvera.
Séminaire Lotharingien de Combinatoire, B84c (2022).
<https://arxiv.org/abs/2008.10168>
21 pages.

RESEARCH PREPRINTS

1. Quivers with potentials associated to triangulated surfaces, part II: Arc representations.
<http://arxiv.org/abs/0909.4100>
52 pages.
2. Generic Caldero-Chapoton functions with coefficients and applications to surface cluster algebras.
Coauthors: Christof Geiss, Jan Schröer.
<https://arxiv.org/abs/2007.05483>
45 pages.
3. Gentle algebras arising from surfaces with orbifold points of order 3, Part I: scattering diagrams.
Coauthor: Lang Mou
<https://arxiv.org/abs/2203.11563>
33 pages.
4. Landau-Ginzburg potentials via projective representations.
Coauthor: Bea de Laporte (formerly Bea Schumann)
<https://arxiv.org/abs/2208.00028>
27 pages.

SELECTED TALKS

- 2022 Jul. *Geometric and Combinatorial Methods in Homological Algebra* $\mathbb{Z}$. Aarhus University, Aarhus, Denmark.
- Jun. *Oberseminar Algebra und Algebraische Geometrie*. Institut für Mathematik, Universität Paderborn, Germany.

- May. *Algebra Seminar*. Wydział Matematyki i Informatyki, Uniwersytetu Jagiellońskiego, Krakow, Poland.
- May. *Köln Algebra and Representation Theory Seminar*. Mathematisches Institut, Universität zu Köln, Germany.
- Apr. *Workshop “Geometry and representations”*. Zentrum für interdisziplinäre Forschung (ZiF), Bielefeld, Germany.
- Mar. *Longitudinal Algebra and Geometry Open Online Seminar (LAGOON)*. Online talk (Zoom).
- Feb. *Coloquio de la Sociedad Matemática Mexicana*. Online talk (Zoom and YouTube). https://youtu.be/8cEQK_o96F8
- 2021 Oct. *Coloquio*. Instituto Tecnológico Autónomo de México (ITAM). Online talk (Zoom).
- Sep. *New developments in representation theory arising from cluster algebras*. Isaac Newton Institute for Mathematical Sciences, Cambridge, Reino Unido. Online talk (Zoom).
- Aug. *Cluster Algebras and Related Topics*. Beijing, China. Online Talk (Zoom).
- Apr. *Coloquio*. Unidad Cuernavaca del Instituto de Matemáticas, UNAM. Online talk (Zoom).
- 2020 Jul. *Algebra Seminar*. Wydział Matematyki i Informatyki, Uniwersytetu Jagiellońskiego, Krakow, Poland. Online talk (Zoom).
- Jun. *FD Seminar*. Hausdorff Center for Mathematics, Rheinische Friedrich-Wilhelms-Universität Bonn, Germany. Online talk (BigBlueButton).
- Jan. *Geometry and Mathematical Physics Seminar*. School of Mathematics, University of Birmingham, UK.
- Jan. *Pure Mathematics Research Seminar*. School of Mathematics and Actuarial Science, University of Leicester, UK.
- Jan. *BIREP - Seminar on representations of finite dimensional algebras*. Universität Bielefeld, Germany.
- Jan. *Oberseminar Darstellungstheorie*. Mathematisches Institut, Universität Bonn, Germany.
- Jan. *Seminario di Algebra e Geometria*. Dipartimento di Matematica “Guido Castelnuovo”, Università di Roma La Sapienza, Italy.
- 2019 Aug. *Coloquio Latinoamericano de Álgebra*. El Colegio Nacional, México. Plenary talk.
- Jul. *Incontri di Algebra e Geometria allo SBAI*. Dipartimento SBAI (Scienze di Base e Applicate per l’Ingegneria), Università di Roma La Sapienza, Italy.
- Jun. *Cluster Algebras 2019 (CA19)*. Research Institute for Mathematical Sciences, Kyoto University, Japan.
- 2018 Mar. *Cluster Algebras, 20 years on*. CIRM, Luminy, France.
- 2015 May. *International Conference on Representation Theory and Commutative Algebra: A conference in honor of Jerzy Weyman’s 60th Birthday*. University of Connecticut, USA.
- 2013 Dec. *Cluster Algebras and Related Topics*. Mathematisches Forschungsinstitut Oberwolfach, Germany.
- Apr. *Algebra, Combinatorics and Representation Theory: In Memory of Andrei Zelevinsky*. Northeastern University, Boston, MA, USA.
- 2011 Oct. *Oberseminar Darstellungstheorie*. Mathematisches Institut, Universität Bonn, Germany.
- Jul. *Seminar, Algebra, Darstellungstheorie, Homologische Methoden*. Institut für Algebra und Zahlentheorie, Universität Stuttgart, Germany.
- Feb. *Séminaire d’algèbre*. Institut Henri Poincaré. Organizado by Université Pierre et Marie Curie, Université Denis Diderot, Institut de Mathématiques de Jussie. Paris, France.
- 2008 Dec. *International Conference on Cluster Algebras and Related Topics*. Palacio de la Autonomía, Universidad Nacional Autónoma de México.
- Jun. *Colloquium of Non-commutative Algebra*. Sherbrooke University and Bishop’s University, Canada.

- 2007 Aug. *International Conference on Representations of Algebras (ICRA XII)*. Nicolaus Copernicus University, Toruń, Poland.

RESEARCH VISITS

- 2022 Jan.– Dec. Mathematisches Institut, Universität zu Köln, Germany. Sabbatical year. Host: Prof. Dr. Sibylle Schroll.
 Sep. Faculty of Science, Vrije Universiteit Amsterdam, Netherlands. Visiting Prof. Dr. Ilke Canakci.
 Aug. Fakultät für Mathematik, Universität Bielefeld. Visiting Prof. Dr. William Crawley-Boevey.
- 2020 Jan. School of Mathematics and Actuarial Science, University of Leicester, UK. Visiting Dr. Yadira Valdivieso-Díaz.
 Jan. Mathematisches Institut, Universität Bonn, Germany. Visiting Prof. Dr. Jan Schröer.
 Jan. Università degli Studi di Roma *La Sapienza*, Italy. Visiting Prof. Dr. Giovanni Cerulli Irelli.
- 2019 Jul. Università degli Studi di Roma *La Sapienza*, Italy. Visiting Prof. Dr. Giovanni Cerulli Irelli.
- 2017 Jun. The University of Sheffield, Inglaterra, UK. Visiting Prof. Dr. Tom Bridgeland.
 May. Università degli Studi di Roma *La Sapienza*, Italy. Visiting Prof. Dr. Giovanni Cerulli Irelli and Dr. Salvatore Stella.
- 2014 Jun. Laboratoire de Mathématique, Université de Paris Sud XI, Orsay, France. Visiting Dr. Pierre-Guy Plamondon.
 Jun. Institut Fourier, Université Joseph Fourier, Grenoble, France. Visiting Dr. Claire Amiot.
 Jan. Department of Mathematics, University of Missouri, USA. Visiting Dr. Andrew Carroll and Prof. Dr. Calin Chindris.
- 2013 Jun. Instituto de Matemáticas, UNAM. Visiting Prof. Dr. Christof Geiss.
 Jan. Instituto de Matemáticas, UNAM. Visiting Prof. Dr. Christof Geiss.
- 2011 Dec. Instituto de Matemáticas, UNAM. Visiting Prof. Dr. Christof Geiss.
- 2010 May. Instituto de Matemáticas, UNAM. Visiting Prof. Dr. Christof Geiss.

VISITORS

- 2022 Jun. Christof Geiss. Visiting Köln from UNAM's Instituto de Matemáticas.
 Mar. Lang Mou. Visiting Köln from Cambridge University, UK.
- 2019 Dic. Ben Davison. Visiting UNAM from University of Edinburgh and Hodge Institute, UK.
 Sep. Lang Mou. Visiting UNAM from University of California, Davis, USA.
 Sep. Osamu Iyama. Visiting UNAM from University of Nagoya, Japan.
 Sep. Jan Schröer. Visiting UNAM from Mathematisches Institut der Universität Bonn, Germany.
 Mar. Anna Felikson. Visiting UNAM from Durham University, UK.
 Mar. Michael Shapiro. Visiting UNAM from Michigan State University, USA.
 Mar. Raymundo Bautista. Visiting UNAM's Instituto de Matemáticas from UNAM's Centro de Ciencias Matemáticas, México.
- 2018 Nov. Katerina Hristova. Visiting UNAM from University of Warwick, UK.
 Abr. Guillaume Douville. Visiting UNAM from Université du Québec à Montréal.
- 2017 Ago. Mónica del Rocío García Gallegos. Visiting UNAM from Universidad Autónoma de Aguascalientes, México.
- 2016 Nov. Tom Sutherland. Visiting UNAM from Università di Pavia, Italy.

- Oct. Carlos Enrique Valencia Oleta. Visiting UNAM from Centro de Investigación y Estudios Avanzados, Instituto Politécnico Nacional, México.
- Mar. Pierre-Guy Plamondon. Visiting UNAM from Université de Paris Sud XI, Orsay, France.
- 2015 Ago. John Edward Hopcroft. Visiting UNAM from Cornell University, Ithaca, NY, USA.
- May. Jan Geuenich. Visiting UNAM from Mathematisches Institut der Universität Bonn, Germany.
- 2014 Dic. Andrew Carroll. Visiting UNAM from DePaul University, Chicago, IL, USA.

ACTIVE PARTICIPATION IN RESEARCH SEMINARS

- 2022 Köln Algebra and Representation Theory Seminar. Mathematisches Institut, Universität zu Köln.
- 2020 – 2021 Online Cluster Algebras Seminar. <https://paginas.matem.unam.mx/ocas/>
- 2011 – 2013 Seminar Cluster Algebras and Related Topics. Mathematisches Institut, Universität Bonn.
- 2006 – 2010 Cluster Algebra Seminar. Department of Mathematics, Northeastern University.
- 2005-Present Seminario de teoría de representaciones de álgebras. Instituto de Matemáticas, Universidad Nacional Autónoma de México.

POSTDOCS SUPERVISION

1. Dr. Jonathan Michael Wilson, Instituto de Matemáticas, UNAM, from March 1st, 2019, to February 29, 2020.

THESES SUPERVISION (PH.D.)

1. Diego Velasco.
Ph.D. in Mathematics, Instituto de Matemáticas Universidad Nacional Autónoma de México.
Thesis: *A family of Caldero-Chapoton algebras that have the Laurent phenomenon*.
Thesis Advisor: D. Labardini.
Thesis Defense Date: March 21, 2019.
2. Jan Geuenich.
Ph.D. in Mathematics, Mathematisches Institut, Universität Bonn.
Thesis: *Quiver modulations and potentials*.
Thesis Advisors: Prof. Dr. Jan Schröer,
D. Labardini. (Not recognized officially by Universität Bonn).
Thesis Defense Date: March 16, 2017.

THESES SUPERVISION (MASTER)

1. Édgar Jesús Vázquez Alonso.
Master in Mathematical Sciences, UNAM, México.
Thesis: *Un problema de moduli sin espacio de moduli*.
Thesis Advisor: D. Labardini.
Qualifying Exams: Matemáticas Discretas (Teoría de Gráficas), Álgebra Moderna, Ecuaciones Diferenciales Ordinarias.
Degree awarded on: August 23, 2019.
2. Rodrigo Jiménez Correa.
Master in Mathematical Sciences, Facultad de Matemáticas, Universidad Autónoma de Yucatán, México.
Thesis: *Grupos Fuchsianos, superficies hiperbólicas y el teorema del polígono de Poincaré*.
Thesis Advisors: Prof. Dr. Jesús Efrén Pérez Terrazas,
D. Labardini.
Degree awarded on: November 2017.

3. Luis Alberto Gómez Telésforo.
 Master in Mathematical Sciences, UNAM, México.
 Thesis: *Álgebras de Hopf asociadas a torres de álgebras*.
 Thesis Advisor: D. Labardini.
 Qualifying Exams: Álgebra Conmutativa (approved with a special commendation from UNAM's Graduate Program in Mathematics), Ecuaciones Diferenciales, Geometría Diferencial.
 Degree awarded on: June 2017.

THESES SUPERVISION (UNDERGRADUATE)

1. Javier Alejandro de Loera Chávez.
 Bachelor of Mathematics, Facultad de Ciencias, UNAM, México.
 Thesis: *Un modelo combinatorio del espacio de móduli de Riemann*.
 Thesis Advisor: D. Labardini.
 Thesis Defense Date: January 20, 2023.
 Summa Cum Laude in Thesis Defense.
2. José Luis Miranda Olvera.
 Bachelor of Mathematics, Facultad de Ciencias, UNAM, México.
 Thesis: *Carcajes con potencial no degenerados asociados a triangulaciones de superficies: Existencia y unicidad*.
 Thesis Advisor: D. Labardini.
 Thesis Defense Date: September 29, 2016.
 Summa Cum Laude in Thesis Defense.
Sotero Prieto Prize 2017 of the Mexican Mathematical Society to the best Undergraduate Thesis in Mathematics.
3. Luis Alberto Gómez Telésforo.
 Bachelor of Mathematics, Facultad de Ciencias, UNAM.
 Thesis: *Representaciones del grupo simétrico en el lenguaje de las álgebras de Hopf*.
 Thesis Advisor: D. Labardini.
 Thesis Defense Date: May 27, 2015.
 Summa Cum Laude in Thesis Defense.

FINANCIAL SUPPORT TO STUDENTS

1. Javier de Loera.
 He wrote his Undergraduate Thesis with the support of a scholarship which I funded with the Grant *PAPIIT-IN112519*.
2. Karen Berenice Santos Contreras.
 From March to September 2020, she received a scholarship which I funded with the *Marcos Moshinsky Chair* awarded to me by UNAM's Physics Institute and the Marcos Moshinsky Foundation.
3. Mónica del Rocío García Gallegos.
 From September to December 2017, she received a scholarship which I funded with the Grant *CONACyT-238754*.
4. José Luis Miranda Olvera.
 He wrote his Undergraduate Thesis with the support of a scholarship which I funded with the Grant *PAPIIT-IA102215*.
5. Luis Alberto Gómez Telésforo.
 He wrote his Master Thesis with the support of a scholarship which I funded with the Grant *CONACyT-238754*.

TEACHING

Spring 2022: I have taught the course *Hyperbolic Geometry* in both the Undergraduate and the Graduate Programs in Mathematics of Universität zu Köln, Germany.

2013 – 2021: I have taught 13 Undergraduate level courses at UNAM's School of Sciences, and 6 courses at UNAM's Graduate Program in Mathematical Sciences:

- *Curso Avanzado de Geometría*, semester 2021-2 (Geometría Hiperbólica), graduate level,
- *Curso Avanzado de Análisis*, semester 2021-1 (Superficies de Riemann), graduate level,
- *Seminario de Geometría A*, semesters 2016-1 (Introducción a la geometría hiperbólica), 2020-2 (Geometría Hiperbólica), undergraduate level,
- *Álgebra Moderna III*, semester 2020-1, undergraduate level,
- *Álgebra Moderna II*, semester 2019-2, undergraduate level,
- *Álgebra Moderna I*, semester 2019-1, undergraduate level,
- *Ecuaciones Diferenciales I*, semester 2018-2, undergraduate level,
- *Curso Avanzado de Álgebra*, semesters 2014-1 (Representaciones de Especies sobre Campos Finitos), 2018-1 (Números p -ádicos), graduate level,
- *Álgebra Lineal I*, semesters 2015-1, 2018-1, undergraduate level,
- *Álgebra Superior II*, semesters 2014-2, 2017-2, undergraduate level,
- *Álgebra Superior I*, semester 2017-1, undergraduate level,
- *Álgebra Moderna*, semesters 2016-2, 2022-1, graduate level,
- *Seminario de Álgebra A*, semester 2015-2 (Introducción a la Teoría de Números Algebraicos), undergraduate level,
- *Cálculo Diferencial e Integral I*, semester 2014-1, undergraduate level.

2016: I was the Teaching Assistant of the *Curso avanzado de álgebra* (Álgebras de Lie y sus Representaciones), offered by Prof. Dr. Christof Geiss during the semester 2016-2 in UNAM's Graduate Program in Mathematical Sciences.

2012: Following a request of Prof. Dr. Jan Schröer, I delivered four 90 minute long lectures at the graduate course *Advanced topics in representation theory*, offered by Prof. Schröer within the Graduate Program of the Mathematisches Institut der Universität Bonn.

2006 – 2010: I taught 10 undergraduate level courses at Northeastern University (Boston, MA, USA):

- Discrete Mathematics (3 times),
- Mathematical thinking (2 times),
- Differential Equations and Linear Algebra (2 times),
- Calculus 3 (1 time),
- Calculus 2 for Science and Engineering (1 time),
- Calculus 1 (1 time).

2002 – 2006: I was the Teaching Assistant in 12 undergraduate level courses at UNAM's School of Sciences:

- Álgebra Superior I (4 times),
- Álgebra Superior II (2 times),
- Álgebra Moderna I (2 times),
- Álgebra Lineal I (2 times),
- Álgebra Lineal II (1 time),
- Seminario de Análisis Combinatorio (1 time).

MINI-COURSES

- 2019 Abr. “*Cluster algebras from surfaces*”, Tropical Geometry meets Representation Theory II (TGRTII). University of Leicester, Inglaterra.
- 2018 Mayo “*Introducción a las álgebras de conglomerado*”, Primer Encuentro de Sociedades de Matemáticas de Colombia y México. Universidad del Norte, Colombia.
- 2017 Mar. “*Species, triangulations and potentials*”, Spring School *Cluster Algebras in Mathematical Physics* (CAMP), Institut für Mathematik, Johannes Gutenberg-Universität Mainz, Alemania.
- 2016 Oct. “*Breve Panorama de la Teoría de Grupos*”, Escuela de Matemáticas de América Latina y del Caribe (EMALCA), Universidad de Tarapacá, Arica, Chile.
- 2014 Oct. *Curso de preparación para la “Olimpiada del Conocimiento” de la Escuela Nacional Preparatoria de la UNAM* en el área de Matemáticas. Plantel 4 de la ENP-UNAM.
- Jul. *Escuela de investigación pre-CIMPA “Una introducción al álgebra No Conmutativa”*. Penonomé, Coclé, Panamá.

EDITORIAL BOARDS

Since December 6, 2018, I am Associate Editor of the *Bulletin of the Mexican Mathematical Society*.

ORGANIZATION

- 2022 Sep. *Andrejewski Tage 2022, “Quivers, representation theory and physics”*. Workshop at Universität zu Köln. 7–9 September 2022. <https://sites.google.com/view/quivers-in-physics/>
- 2021 Nov. Algebra Session of the *Third Meeting of Mexican Female Mathematicians*. <https://smm.org.mx/3emmm/>
- 2020 2021 *Online Cluster Algebras Seminar*. <https://paginas.matem.unam.mx/ocas/>
- Oct. Winter School *Connections between representation theory and geometry*. Hausdorff Research Institute for Mathematics, Bonn. <https://www.him.uni-bonn.de/en/programs/past-programs/past-junior-trimester-programs/new-trends-in-representation-theory/new-trends-in-representation-theory-school/>
Report available at https://www.him.uni-bonn.de/uploads/media/Report_Group_Cluster_algebras_and_algebras_from_surfaces.pdf
- 2019 Dic. *Seminario Itinerante de Teoría de Representaciones CCM-FC-IM, UNAM*. Unidad Oaxaca del Instituto de Matemáticas, UNAM, México.
- 2018 Sep. *Advances in Representation Theory of Algebras 7, celebrating José Antonio de la Peña’s 60th birthday*. Instituto de Matemáticas, UNAM, México.
- Ene. Workshop *Cluster Varieties and Mathematical Physics*. Casa Matemática Oaxaca, México.
- 2017 Dic. *75 years of Mathematics in Mexico*. Instituto de Matemáticas, UNAM, México.
- Nov. *Third meeting of the US-Mexico Conference on Representation Theory, Categorification, and Non-commutative algebra*. Instituto de Matemáticas, UNAM, México.
- Jul. *Special session on Calabi-Yau manifolds and Calabi-Yau algebra*. Mathematical Congress of the Americas 2017, McGill University, Montreal, Quebec, Canada.
- Mar. *Seminario Itinerante CCMUNAM-CIMAT-IMUNAM de Teoría de Representaciones*. Instituto de Matemáticas, UNAM, México.
- 2016 Feb. *Seminario Itinerante CCMUNAM-CIMAT-IMUNAM de Teoría de Representaciones*. Centro de Investigación en Matemáticas, Guanajuato, México.
- 2015 Dic. *Encuentro Nacional de Jóvenes Investigadores en Matemáticas (ENJIM)*. Instituto de Matemáticas, UNAM, México.
- Aug. *Modern algorithmic techniques in computer science for Big Data: A Workshop with Prof. John Hopcroft*. INFOTEC-DF, México.

ADDITIONAL INFORMATION

Date and Place of Birth: June 8, 1981, Orizaba, Veracruz, México.

Citizenship: Mexican.

Languages: Spanish (native speaker), English (fluent, TOEFL-CBT score 263/300 back in 2005), German (Intermediate, ~B2), Italian (Beginner).

Programming Languages: Python (advanced skills, specialized in the development of Graphical User Interfaces, a.k.a. GUIs, as well as Geometric Visualization Apps).

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