

Gustavo Jasso

Doctor of Philosophy

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“Mathematics knows no races or geographic boundaries; for mathematics, the cultural world is one country.” – D. Hilbert

Biographical information

Full name Gustavo Jasso Ahuja
Birth date March 18, 1987
Hometown Guadalajara, Mexico
Nationality Mexican

Languages

Spanish, native language.

English, fluent in speaking, reading and writing.

TOEFL iBT: 114/120 (November 2010).

German, intermediate.

Roughly at level B1/B2 of the CEFR (unofficial).

Research interests

- Homological algebra, homotopical algebra, higher category theory
- Representation theory of finite dimensional algebras
- Cluster algebras

Employment history

- 2017–Present **Akademischer Rat auf Zeit**, *Mathematisches Institut, Rheinische Friedrich-Wilhelms-Universität Bonn*, Bonn, Germany.
Starting date: October 1, 2017.
- 2014–2017 **Hausdorff Postdoc**, *Hausdorff Center for Mathematics, Rheinische Friedrich-Wilhelms-Universität Bonn*, Bonn, Germany.
Mentor: Prof. Dr. Jan Schröer.
Starting date: October 1, 2014.
Ending date: September 30, 2017.

Education history

- 2011–2014 **Doctor of Philosophy (Mathematical Science)**, *Nagoya University*, Nagoya, Japan.
Thesis title: On τ -tilting theory and higher Auslander–Reiten theory.
Supervisor: Prof. Dr. Osamu Iyama.
Degree obtained on September 29, 2014.
- 2009–2011 **Master of Science degree in mathematics (with honorific mention)**, *Universidad Nacional Autónoma de México (UNAM)*, Mexico City, Mexico.
Thesis title: El crecimiento de un álgebra de conglomerados de tipo tubular.
Supervisors: Prof. Dr. Michael Barot and Prof. Dr. Christof Geiß.
GPA: 9.87/10.

2005–2010 **Undergraduate degree in mathematics (with honorific mention)**, *Universidad Nacional Autónoma de México (UNAM)*, Mexico City, Mexico.
Thesis title: Álgebras de Lie de tipo afín extendido y formas cuadráticas.
Supervisor: Prof. Dr. Michael Barot.
GPA: 9.84/10.

Academical distinctions

- 2018 **International Conference on Representations of Algebras (ICRA) 2018 Award**, *ICRA 2018 Scientific and Award Committees*, Prague, Czech Republic.
Awarded at each session of ICRA for outstanding work by young mathematicians (not older than 35 years of age, except to allow for a broken career) in the field of Representations of Finite Dimensional Algebras. A second prize was awarded to Dr. Julian Külshammer.
- 2010 **Premio Sotero Prieto 2010**, *Sociedad Matemática Mexicana*, Tuxtla Gutiérrez, Mexico.
Awarded to the best undergraduate thesis in mathematics presented at a Mexican institution between June 2009 and May 2010 (three theses were recognized).

Publications

Preprints

- [1] Tobias Dyckerhoff, Gustavo Jasso, and Tashi Walde. Simplicial structures in higher Auslander–Reiten theory. *arXiv:1811.02461*, nov 2018.
- [2] Gustavo Jasso and Julian Külshammer. Higher Nakayama algebras I: Construction. *arXiv:1604.03500*, apr 2016.

Published

- [1] Gustavo Jasso and Sondre Kvamme. An introduction to higher Auslander–Reiten theory. *Bull. Lond. Math. Soc.* Early view (2018).
- [2] Laurent Demonet, Osamu Iyama, and Gustavo Jasso. τ -Tilting Finite Algebras, Bricks and g -Vectors. *Int. Math. Res. Not. IMRN*, pages 1–41, 2017.
- [3] Osamu Iyama and Gustavo Jasso. Higher Auslander Correspondence for Dualizing R-Varieties. *Algebr. Represent. Theory*, 20(2):335–354, 2017.
- [4] Gustavo Jasso. n -abelian and n -exact categories. *Math. Z.*, 283(3-4):703–759, 2016.
- [5] Petter Andreas Bergh, Gustavo Jasso, and Marius Thaule. Higher n -angulations from local rings. *J. Lond. Math. Soc. (2)*, 93(1):123–142, 2016.
- [6] Gustavo Jasso. τ^2 -stable tilting complexes over weighted projective lines. *Adv. Math.*, 273:1–31, 2015.
- [7] Gustavo Jasso. Reduction of τ -tilting modules and torsion pairs. *Int. Math. Res. Not. IMRN*, (16):7190–7237, 2015.
- [8] Gustavo Jasso. The extended affine Lie algebra associated with a connected non-negative unit form. *J. Algebra*, 409:148–161, 2014.
- [9] Michael Barot, Christof Geiß, and Gustavo Jasso. Tubular cluster algebras II: Exponential growth. *J. Pure Appl. Algebra*, 217(10):1825–1837, 2013.

Proceedings

- [1] Gustavo Jasso and Julian Külshammer. Nakayama-type phenomena in higher Auslander–Reiten theory. In *Representations of algebras*, volume 705 of *Contemp. Math.*, pages 79–98. Amer. Math. Soc., Providence, RI, 2018.

- [2] Spherical objects in higher Auslander–Reiten theory. In *Representation Theory of Quivers and Finite Dimensional Algebras*, volume 14 of *Oberwolfach Rep.*, pages 621–622. European Mathematical Society Publishing House, 2017.
- [3] Gustavo Jasso. Reduction of τ -tilting modules and torsion classes. In *Proceedings of the 16th Workshop on Representation Theory of Algebraic Groups and Quantum Groups*, pages 157–160, jun 2013.
- [4] Gustavo Jasso. Cluster-tilted algebras of canonical type and quivers with potential. In *Proceedings of the 45th Symposium on Ring Theory and Representation Theory*, pages 61–68, sep 2012.
- [5] Gustavo Jasso. Cluster-tilted algebras of canonical type and graded quivers with potential. In *Proceedings of the 15th Workshop on Representation Theory of Algebraic Groups and Quantum Groups*, pages 13–18, may 2012.