

# 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 **Akademischen 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.
- 2011–2014 **Research assistant**, *Graduate School of Mathematics, Nagoya University*, Nagoya, Japan.

## Education history

- 2011–2014 **Doctor of Philosophy (Mathematical Science)**, *Nagoya University*, Nagoya, Japan.  
Thesis title: On  $\tau$ -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).

## List of publications

### Preprints

- [1] Gustavo Jasso and Julian Külshammer. Higher Nakayama algebras I: Construction. *arXiv:1604.03500*, apr 2016.

### Published

- [1] Gustavo Jasso and Kvamme Sondre. An introduction to higher Auslander–Reiten theory. *Bull. Lond. Math. Soc.* Accepted for publication (2018).
- [2] Laurent Demonet, Osamu Iyama, and Gustavo Jasso.  $\tau$ -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.  $\tau^2$ -stable tilting complexes over weighted projective lines. *Adv. Math.*, 273:1–31, 2015.
- [7] Gustavo Jasso. Reduction of  $\tau$ -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 Proceedings of the 17th Workshop and International Conference on Representations of Algebras (ICRA 2016). Contemp. Math., Amer. Math. Soc., Providence, RI 705 (2018): 79–98.

[Book project](#)

- [1] Gustavo Jasso. *Differential graded categories. A representation theoretic approach*. In progress.