

Gustavo Jasso

Doctor of Philosophy

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Biographical information

Full name Gustavo Jasso Ahuja
Date of birth March 18, 1987
Place of birth Guadalajara, Mexico
Nationality Mexican

Languages

Spanish, native language.

English, fluent in speaking, reading and writing.

TOEFL iBT: 114/120 (November 2010).

German, advanced intermediate (I have lectured in German).

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, 01.10.2017–Present.
Investigator in [Research Area A2](#) Representations and symmetries in algebra and topology.
- 2014–2017 **Hausdorff Postdoc**, *Hausdorff Center for Mathematics, Rheinische Friedrich-Wilhelms-Universität Bonn*, Bonn, Germany, 01.10.2014–30.09.2017.
Mentor: Prof. Dr. Jan Schröer.

Education history

- 2011–2014 **Doctor of Philosophy (Mathematical Science)**, *Nagoya University*, Nagoya, Japan, 29.09.2014.
Thesis title: On τ -tilting theory and higher Auslander–Reiten theory.
Advisor: Prof. Dr. Osamu Iyama.
- 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.
Advisors: Prof. Dr. Michael Barot (official) and Prof. Dr. Christof Geiss (unofficial second advisor).
GPA: 9.67/10.

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.
 Advisor: 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] T. Dyckerhoff, G. Jasso, and Y. Lekili, *The symplectic geometry of higher Auslander algebras: Symmetric products of disks*, [arXiv:1911.11719](https://arxiv.org/abs/1911.11719) (2019).

Publications

- [12] T. Dyckerhoff, G. Jasso, and T. Walde, *Generalised BGP reflection functors via the Grothendieck construction*, *Int. Math. Res. Not. IMRN* (2019), rnz194, [10.1093/imrn/rnz194](https://doi.org/10.1093/imrn/rnz194).
- [11] T. Dyckerhoff, G. Jasso, and T. Walde, *Simplicial structures in higher Auslander–Reiten theory*, *Adv. Math.* **355** (2019), 106762, [10.1016/j.aim.2019.106762](https://doi.org/10.1016/j.aim.2019.106762).
- [10] G. Jasso and Külshammer, *Higher Nakayama algebras I: Construction, with an appendix by J. Külshammer and Ch. Psaroudakis and an appendix by S. Kvamme*, *Adv. Math.* **351** (2019), 1139–1200, [10.1016/j.aim.2019.05.026](https://doi.org/10.1016/j.aim.2019.05.026).
- [9] G. Jasso and S. Kvamme, *An introduction to higher Auslander–Reiten theory*, *Bull. Lond. Math. Soc.* **51** (2019), 1, 1–24, [10.1112/blms.12204](https://doi.org/10.1112/blms.12204).
- [8] L. Demonet, O. Iyama, and G. Jasso, *τ -tilting finite algebras, bricks, and g -vectors*, *Int. Math. Res. Not. IMRN* (2019), 3, 852–892, [10.1093/imrn/rnx135](https://doi.org/10.1093/imrn/rnx135).
- [7] O. Iyama and G. Jasso, *Higher Auslander Correspondence for Dualizing R -Varieties*, *Algebr. Represent. Theory* **20** (2017), 2, 335–354, [10.1007/s10468-016-9645-0](https://doi.org/10.1007/s10468-016-9645-0).
- [6] G. Jasso, *n -abelian and n -exact categories*, *Math. Z.* **283** (2016), 3–4, 703–759, [10.1007/s00209-016-1619-8](https://doi.org/10.1007/s00209-016-1619-8).
- [5] P. A. Bergh, G. Jasso, and M. Thaule, *Higher n -angulations from local rings*, *J. Lond. Math. Soc. (2)* **93** (2016), 1, 123–142, [10.1112/jlms/jdv064](https://doi.org/10.1112/jlms/jdv064).
- [4] G. Jasso, *τ^2 -stable tilting complexes over weighted projective lines*, *Adv. Math.* **273** (2015), 1–31, [10.1016/j.aim.2014.12.018](https://doi.org/10.1016/j.aim.2014.12.018).
- [3] G. Jasso, *Reduction of τ -tilting modules and torsion pairs*, *Int. Math. Res. Not. IMRN* (2015), 16, 7190–7237, [10.1093/imrn/rnu163](https://doi.org/10.1093/imrn/rnu163).

- [2] G. Jasso, *The extended affine Lie algebra associated with a connected non-negative unit form*, *J. Algebra* **409** (2014), 148–161, [10.1016/j.jalgebra.2014.03.029](https://doi.org/10.1016/j.jalgebra.2014.03.029).
- [1] M. Barot, C. Geiß, and G. Jasso, *Tubular cluster algebras II: Exponential growth*, *J. Pure Appl. Algebra* **217** (2013), 10, 1825–1837, [10.1016/j.jpaa.2012.12.012](https://doi.org/10.1016/j.jpaa.2012.12.012).

Proceedings, extended abstracts & other writings

- [8] G. Jasso, *The symplectic geometry of higher Auslander algebras, an overview*, in: *Representation Theory of Quivers and Finite Dimensional Algebras, Abstracts from the workshop held January 19–25, 2020*, ed. by C. Amiot, W. Crawley-Boevey, O. Iyama, and H. Krause, Oberwolfach Rep. (to appear).
- [7] G. Jasso, *Higher Auslander algebras of type \mathbb{A} and the higher Waldhausen S -constructions*, [arXiv:1904.10163](https://arxiv.org/abs/1904.10163) (2019), To appear in the proceedings of the ICRA 2018.
- [6] G. Jasso and J. Külshammer, *Nakayama-type phenomena in higher Auslander-Reiten theory*, in: *Representations of algebras*, ed. by G. J. Leuschke, F. Frauke Bleher, R. Schiffler, and D. Zacharia, vol. 705, *Contemp. Math. Amer. Math. Soc.*, Providence, RI, 2018, 79–98, [10.1090/conm/705/14191](https://doi.org/10.1090/conm/705/14191).
- [5] G. Jasso, *Spherical objects in higher Auslander–Reiten theory*, in: *Representation Theory of Quivers and Finite Dimensional Algebras, Abstracts from the workshop held February 19–25, 2017*, ed. by W. Crawley-Boevey, O. Iyama, and H. Krause, vol. 14, Oberwolfach Rep. no. 1, 2017, 591–681, [10.4171/OWR/2017/12](https://doi.org/10.4171/OWR/2017/12).
- [4] G. Jasso and J. Külshammer, *The naive approach for constructing the derived category of a d -abelian category fails*, [arXiv:1604.03473](https://arxiv.org/abs/1604.03473) (2016), Not intended for publication.
- [3] G. Jasso, *Reduction of τ -tilting modules and torsion classes*, in: *Proceedings of the 16th Workshop on Representation Theory of Algebraic Groups and Quantum Groups*, 2013, 157–160.
- [2] G. Jasso, *Cluster-tilted algebras of canonical type and quivers with potential*, in: *Proceedings of the 45th Symposium on Ring Theory and Representation Theory*, 2012, 61–68.
- [1] G. 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*, 2012, 13–18.

Teaching-related activities

Dates in the future indicate impending commitments.

2020–2021 **Teaching assistant (Assistent)**, *Rheinische Friedrich-Wilhelms-Universität Bonn*, Bonn, Germany, Winter Semester 2020/2021.

Course: Exercises to Representation Theory I (V4A3).

Notes: Coordinator of the tutorial sessions for the course Representation Theory I taught by Prof. Dr. Jan Schröer (4 tutors).

2020 **Teaching assistant (Assistent)**, *Rheinische Friedrich-Wilhelms-Universität Bonn*, Bonn, Germany, Summer Semester 2020.

Course: Übungen zu Grundzüge der Darstellungstheorie (V3A3/F4A1).

Notes: Coordinator of the tutorial sessions for the course Grundzüge der Darstellungstheorie taught by Prof. Dr. Jan Schröer (4 tutors).

- 2019–2020 **Teaching assistant (Assistent)**, *Rheinische Friedrich-Wilhelms-Universität Bonn*, Bonn, Germany, Winter Semester 2019/2020.
 Course: Übungen zu Grundzüge der Mathematik I (MB01).
 Notes: Coordinator of the tutorial sessions for the course Grundzüge der Mathematik I taught by Prof. Dr. Rainer Kaenders (6 tutors).
- 2019–2020 **Teaching assistant (Assistent)**, *Rheinische Friedrich-Wilhelms-Universität Bonn*, Bonn, Germany, Winter Semester 2019/2020.
 Course: Übungen zu Einführung in die Algebra (V2A1/MB10).
 Notes: Coordinator of the tutorial sessions for the course Einführung in die Algebra taught by Prof. Dr. Jan Schröer (8 tutors).
- 2019 **Lecturer**, *Rheinische Friedrich-Wilhelms-Universität Bonn*, Bonn, Germany, Summer Semester 2019.
 Course: Graduate Seminar on Representation Theory (S4A2).
 Topic: Triangulated categories in the representation theory of finite-dimensional algebras.
 Notes: The seminar consisted of weekly talks by the participants.
- 2018–2019 **Teaching assistant (Assistent)**, *Rheinische Friedrich-Wilhelms-Universität Bonn*, Bonn, Germany, Summer Semester 2018.
 Course: Übungen zu Einführung in die Algebra (V2A1/MB10).
 Notes: Coordinator of the tutorial sessions for the course Einführung in die Algebra taught by Prof. Dr. Jan Schröer (8 tutors).
- 2018 **Lecturer**, *Rheinische Friedrich-Wilhelms-Universität Bonn*, Bonn, Germany, Summer Semester 2018.
 Course: Graduate Seminar on Representation Theory (S4A2).
 Topic: τ -tilting theory.
 Notes: The seminar consisted of weekly by the participants. Due to the low number of students, there were additional talks by postdocs as well as by me.
- 2018 **Teaching assistant (Assistent)**, *Rheinische Friedrich-Wilhelms-Universität Bonn*, Bonn, Germany, Summer Semester 2018.
 Course: Übungen zu Lineare Algebra II (V1G4).
 Notes: Coordinator of the tutorial sessions for the course Lineare Algebra II taught by Prof. Dr. Jan Schröer (11 tutors).
- 2017–2019 **Oberseminar Darstellungstheorie**, *Rheinische Friedrich-Wilhelms-Universität Bonn*, Bonn, Germany, Winter Semester 2017/2018–Winter Semester 2018/2019.
 Notes: Organiser of the research seminar on representation theory at the Mathematisches Institute of the Rheinische Friedrich-Wilhelms-Universität Bonn.
- 2016–2017 **Teaching assistant (Assistent)**, *Rheinische Friedrich-Wilhelms-Universität Bonn*, Bonn, Germany, Winter Semester 2016/2017.
 Course: Übungen zu Lineare Algebra I (V1G3).
 Notes: Coordinator of the tutorial sessions for the course Lineare Algebra I taught by Prof. Dr. Jan Schröer (11 tutors).
- 2017 **Research school. New trends in representation theory: the impact of cluster theory on representation theory**, *University of Leicester*, Leicester, UK, 19.06.2016–23.06.2017.
 Notes: Tutorial sessions for the course ‘ n -representation theory’ taught by Prof. Dr. Peter Jørgensen.
- 2016–2017 **Lecturer**, *Rheinische Friedrich-Wilhelms-Universität Bonn*, Bonn, Germany, Winter Semester 2016/2017.
 Course: Advanced Topics in Representation Theory (V5A5) - Differential graded categories, a representation theoretic approach.
 Notes: Master course taught through the Hausdorff Center for Mathematics Mentoring Program (29 lectures).
 Mentor: Prof. Dr. Jan Schröer.

- 2010 **Student teaching assistant**, *Facultad de Ciencias, Universidad Nacional Autónoma de México (FC-UNAM)*, Mexico City, Mexico.
Course: Álgebra lineal I (in Spanish).
Lecturer: Raúl González Silva.
[Student supervision and thesis reviews](#)
- 2019–Present **Advisor for bachelor's thesis in mathematics**, *Rheinische Friedrich-Wilhelms-Universität Bonn*, Bonn, Germany.
- George Tyriard. 'A Morita-theoretic proof of the Dold–Kan correspondence', expected September 2020.
Second advisor (Prüfer): Prof. Dr. Jan Schröer.
 - Tanja Helme. 'Continued fractions and snake graphs', expected September 2020.
Second advisor (Prüfer): Prof. Dr. Jan Schröer.
 - Aaron Wild. 'The differential graded nerve', September 2020.
Second advisor (Prüfer): Prof. Dr. Jan Schröer.
 - Roman Höffken. 'Morita Theorie für Ringe und Kategorien', January 2020.
Second advisor (Prüfer): Prof. Dr. Jan Schröer.
 - Vincent Siebler. 'The derived category of a gentle algebra', December 2019.
Second advisor (Prüfer): Prof. Dr. Jan Schröer.
- 2017–Present **Advisor for master's thesis in mathematics**, *Rheinische Friedrich-Wilhelms-Universität Bonn*, Bonn, Germany.
- Jona Klemenc. 'The stable hull of exact ∞ -categories', August 2020.
Second advisor (Prüfer): Prof. Dr. Stefan Schwede.
 - Calvin Pfeifer. 'Torsion classes and wide subcategories', January 2020.
Second advisor (Prüfer): Prof. Dr. Jan Schröer.
 - Jan-Paul Lerch. 'Bijections in τ -tilting theory', October 2019.
Second advisor (Prüfer): Prof. Dr. Jan Schröer.
 - Aran Singh Tattar. 'On Gorenstein k -categories', April 2018.
Second advisor (Prüfer): Prof. Dr. Jan Schröer.
- 2015–Present **Second advisor (Prüfer) for master thesis in mathematics**, *Rheinische Friedrich-Wilhelms-Universität Bonn*, Bonn, Germany.
Notes: This is the role of an *examiner and rapporteur* and not the role of an advisor (despite the adopted English translation).
- Bjondina Kabashaj, 'Tilting modules and triangulations of polygons' (Prof. Dr. Jan Schröer, 2019).
 - Abdalla Alia, ' τ -tilting theory' (Prof. Dr. Jan Schröer, 2017).
 - Islam Foniqi, 'Finite Representation Type is Open' (Prof. Dr. Jan Schröer, 2017).
 - Daniel Rehn, 'Modules without Self-extensions over Path Algebras' (Prof. Dr. Jan Schröer, 2017).
 - Bunlong Lay, 'Crawley–Boevy–Kerner functor' (Prof. Dr. Jan Schröer, 2017).
 - Jonas Röhrig, 'Stable Components of Auslander–Reiten Quivers of Representation-Finite Algebras' (Prof. Dr. Jan Schröer, 2017).
 - Leon Lang, 'Asymptotic behaviour of Auslander–Reiten translations' (Prof. Dr. Jan Schröer, 2017).
 - Mário Marcelo da Conceição Cardoso, 'The global dimension of endomorphism rings of generator-cogenerators over Nakayama algebras' (Prof. Dr. Jan Schröer, 2017).
 - Malte Leip, 'Relative Calabi–Yau Structures over Commutative Ring Spectra' (Prof. Dr. Dyckerhoff, 2017).
 - Vanessa Geierse, 'Representation Theory of Polyquivers' (Prof. Dr. Schröer, 2015).

2018–Present **Second advisor (Prüfer) for bachelor's thesis in mathematics**, *Rheinische Friedrich-Wilhelms-Universität Bonn*, Bonn, Germany.

Notes: This is the role of an *examiner and rapporteur* and not the role of an advisor (despite the adopted English translation).

- Meyer, Sebastian, 'Profinite Abelsche Gruppen' (Prof. Dr. Jan Schröer, 2020).
- Schüler, Yannik, 'Darstellungen von modulierten Graphen' (Prof. Dr. Jan Schröer, 2018).
- Xiang Li, 'The Perron–Frobenius theorem and its applications' (Prof. Dr. Jan Schröer, 2018).

Service to the scientific community

Referee for the following journals

Advances in Mathematics; Algebras and Representation Theory; Applied Categorical Structures; Boletín de la Sociedad Matemática Mexicana; Bulletin of the Iranian Mathematical Society; Bulletin of the London Mathematical Society; Communications in Algebra; Czechoslovak Mathematical Journal; Frontiers of Mathematics in China; Glasgow Mathematical Journal; Hokkaido Mathematical Journal; Homology, Homotopy and Applications; **International Mathematics Research Notices IMRN**; **Journal für die reine und angewandte Mathematik (Crelle's Journal)**; Journal of Algebra; Journal of Pure and Applied Algebra; Nagoya Mathematical Journal.

'Quick opinions' for the following journals

Arkiv för matematik; Compositio Mathematica; Mathematische Zeitschrift; Proceedings of the London Mathematical Society; Transactions of the American Mathematical Society.

Reviewer for the following services

Mathematical Reviews.

Organisation of scientific events

- 2020 **ICRA 2020 (online due to the COVID-19 pandemic)**, *International Conference on Representation Theory of Algebras*, November 2020.
Member of the organising committee.
- 2020 **FD Seminar**, *Online seminar on representation theory of quivers and finite-dimensional algebras*, Since May 2020.
Organiser (with five other colleagues).
See the seminar's website for details: <https://www.fd-seminar.xyz>.
- 2020 **Junior Trimester Program (JTP) on 'New trends in representation theory'**, *Hausdorff Research Institute for Mathematics (HIM)*, Bonn, Germany, 01.09.2020–18.12.2020.
Scientific advisor (jointly with Prof. Dr. Jan Schröer).
- 2019 **Hausdorff Summer School on Stability Conditions in Representation Theory**, *Hausdorff Center for Mathematics (HCM)*, Bonn, Germany, 16.09.2019–20.09.2019.
Organiser (jointly with Prof. Dr. Jan Schröer).
Notes: Part of the academic program of the 'Hausdorff School for Advanced Studies'.
- 2017 **Workshop: A_∞ -structures in geometry and representation theory**, *Hausdorff Research Institute for Mathematics (HIM)*, Bonn, Germany, 04.12.2017–08.12.2017.
Organiser (jointly with Dr. Julian Külshammer).
Notes: Part of the scientific program of the 'Junior Trimester Program: Symplectic Geometry and Representation Theory.'

- 2017 **Spring school: Cluster Algebras in Mathematical Physics (CAMP)**, *Johannes Gutenberg-Universität Mainz*, Mainz, Germany, 27.03.2017–31.03.2017.
Member of the Scientific Committee.
Notes: Part of the graduate program of the [SFB/Transregio 45](#).

Grants and scholarships

- 2011–2014 **Travel grant**, *Hausdorff Center for Mathematics, Rheinische Friedrich-Wilhelms-Universität Bonn*, Bonn, Germany.
Travel grant for visiting the University of California, Berkeley during the period 01.10.2017–31.10.2017 within the program ‘Academical cooperation Berkeley–HCM’.
- 2011–2014 **Scholarship for studies abroad (Ph.D. program)**, *Consejo Nacional de Ciencia y Tecnología (CONACyT)*, Mexico City, Mexico.
- 2010–2011 **Scholarship for the M.Sc. program in mathematics**, *Consejo Nacional de Ciencia y Tecnología (CONACyT)*, Mexico City, Mexico.
- 2009–2010 **PAPIIT Scholarship CB-2007/81948**, *Universidad Nacional Autónoma de México (UNAM)*, Mexico City, Mexico.

Public outreach

- 2018 **Interview by Motivos matemáticos**, *Instituto de Matemáticas, Universidad Nacional Autónoma de México (IM-UNAM)*, Mexico City, Mexico.
Interview by the Mexican online magazine *Motivos matemáticos* (in Spanish).
- 2010 **Festival Matemático del Instituto de Matemáticas**, *Instituto de Matemáticas, Universidad Nacional Autónoma de México (IM-UNAM)*, Mexico City, Mexico.
Member of the Organising Committee.
- 2009 **Social service for the undergraduate program in mathematics**, *Facultad de Ciencias, Universidad Nacional Autónoma de México (FC-UNAM)*, Mexico City, Mexico.
Notes: Translation to the English language of the book ‘Un paseo por Hiperbolía’ written by Prof. Dr. Michael Barot and edited by the Sociedad Matemática Mexicana (the translation is unpublished).

Research visits

Dates in the future indicate accepted invitations and/or scheduled participation.

- 2020 **Università degli Studi di Verona**, Verona, Italy.
Host: Prof. Dr. Lidia Angeleri Hügel.
Period: 17.02.2020–21.02.2020.
- 2020 **King’s College London**, London, United Kingdom.
Host: Dr. Yankı Lekili.
Period: 03.02.2020–07.02.2020.
- 2019 **Uppsala Universitet**, Uppsala, Sweden.
Host: Dr. Julian Külshammer.
Period: 02.12.2019–06.12.2019.
- 2018 **Université de Paris Sud XI**, Paris, France.
Hosts: Prof. Dr. Bernhard Keller and Dr. Pierre-Guy Plamondon.
Period: 03.12.2018–07.12.2018.
- 2018 **University of Glasgow**, Glasgow, UK.
Host: Dr. Theo Raedschelders.
Period: 12.11.2018–16.11.2018.
- 2017 **University of California, Berkeley**, Berkeley CA, USA.
Host: Prof. Dr. Lauren Williams.
Period: 01.10.2017–31.10.2017.

- 2017 **Universität Stuttgart**, Stuttgart, Germany.
Host: Dr. Julian Külshammer.
Period: 03.04.2017–05.04.2017.
- 2016 **Norges teknisk-naturvitenskapelige universitet (NTNU)**, Trondheim, Norway.
Hosts: Prof. Dr. Petter Bergh and Dr. Marius Thaule.
Period: 08.06.2016–22.06.2016.
- 2015 **Universität Stuttgart**, Stuttgart, Germany.
Host: Dr. Julian Külshammer.
Period: 02.11.2015–25.11.2015.
- 2015 **Universidad Nacional Autónoma de México (UNAM)**, Mexico City, Mexico.
Hosts: Prof. Dr. Christof Geiß and Prof. Dr. Octavio Mendoza.
Period: 18.09.2015–18.10.2015.
- 2015 **Universität Stuttgart**, Stuttgart, Germany.
Host: Dr. Julian Külshammer.
Period: 07.07.2015–17.07.2015.
- 2015 **Norges teknisk-naturvitenskapelige universitet (NTNU)**, Trondheim, Norway.
Hosts: Prof. Dr. Petter Bergh and Dr. Marius Thaule.
Period: 08.06.2015–14.06.2016.
- 2015 **Universität Stuttgart**, Stuttgart, Germany.
Host: Dr. Julian Külshammer.
Period: 19.01.2015–30.01.2015.
- Meetings & research programs**
- 2021 **Abel Symposium 2021**, Ålesund, Norway.
Topic: Triangulated categories in representation theory and beyond.
Period: 21.06.2021–25.06.2021.
- 2020 **BIRS/Casa Matemática Oaxaca (cancelled due to the COVID-19 pandemic)**, Oaxaca, Mexico.
Workshop: Higher Segal Spaces and their Applications to Algebraic K-Theory, Hall Algebras, and Combinatorics.
Period: 14.06.2020–19.06.2020.
- 2020 **Mathematisches Forschungsinstitut Oberwolfach**, Oberwolfach, Germany.
Workshop: Representation Theory of Quivers and Finite Dimensional Algebras.
Period: 19.01.2020–25.01.2020.
- 2019 **BIRS/Casa Matemática Oaxaca**, Oaxaca, Mexico.
Workshop: Tilting Theory, Singularity Categories & Noncommutative Resolutions.
Period: 02.09.2019–06.09.2019.
- 2017 **Hausdorff Research Institute for Mathematics**, Bonn, Germany.
Junior Hausdorff Trimester Program “Symplectic Geometry and Representation Theory”
Period: 01.11.2017–21.12.2017.
Notes: Leader of the group ‘Mirror symmetry, Fukaya categories and Auslander–Reiten theory’ (this is an administrative role).
- 2017 **Mathematisches Forschungsinstitut Oberwolfach**, Oberwolfach, Germany.
Workshop: Representation Theory of Quivers and Finite Dimensional Algebras.
Period: 20.02.2017–25.02.2017.
- 2015 **BIRS/Casa Matemática Oaxaca**, Oaxaca, Mexico.
Workshop: Preprojective Algebras Interacting with Singularities, Cohen–Macaulay Modules and Weighted projective Spaces.
Period: 04.10.2015–09.10.2015.
- 2015 **Institut Mittag-Leffler, postdoc fellowship**, Djursholm, Sweden.
Program: Representation Theory.
Period: 22.03.2015–22.05.2015.
- 2013 **Mathematisches Forschungsinstitut Oberwolfach**, Oberwolfach, Germany.
Oberwolfach Seminar: Cluster Algebras and Representation Theory.
Period: 13.10.2013–19.10.2013.

Talks in conferences, workshops and seminars

Dates in the future indicate scheduled talks.

Invited talks

- Sep 2021 **Workshop: New developments in representation theory arising from cluster algebras**, *Isaac Newton Institute for Mathematical Sciences*, Cambridge, United Kingdom.
Title: TBD.
Note: Part of the scientific program of the program *Cluster algebras and Representation Theory*
- Oct 2020 **Winter school: Connections between representation theory and geometry (online due to the COVID-19 pandemic)**, *Hausdorff Research Institute for Mathematics (HIM)*, Bonn, Germany.
Title: Partially wrapped Fukaya categories of symmetric products of marked disks.
Note: Part of the scientific program of the Junior Trimester Program *New Trends in Representation Theory*.
- Sep 2020 **A conference in celebration of the 60th Birthday of Bill Crawley-Boevey (postponed due to the COVID-19 pandemic)**, *The University of Manchester*, Manchester, United Kingdom.
Title: TBD.
- Jun 2020 **Braids, mutations and twists in algebra and geometry (postponed due to the COVID-19 pandemic)**, *Uppsala Universitet*, Uppsala, Sweden.
Title: TBD.
- Aug 2019 **Two Weeks of Silting - Summer School and Conference**, *Universität Stuttgart*, Stuttgart, Germany.
Three lectures on ‘Stable ∞ -categories: localisations and recollements’.
- Jun 2019 **Méthodes catégoriques et homotopiques en théorie des représentations**, *Université de Picardie Jules Verne*, Amiens, France.
Title: Generalised BGP reflection functors via recollements.
- May 2019 **Lond. Math. Soc. Northern Regional Meeting and Workshop on Higher Homological Algebra**, *Newcastle University*, Newcastle upon Tyne, UK.
Title: Generalised BGP reflection functors via recollements.
- Jan 2019 **Thomas Poguntke Memorial Workshop**, *Centre de Recerca Matemàtica (CRM)*, Barcelona, Spain.
Title: A representation-theoretic perspective on the higher Waldhausen S -constructions.
- Sep 2018 **Advances in Representation Theory of Algebras (ARTA) VII**, *Instituto de Matemáticas, Universidad Nacional Autónoma de México (IM-UNAM)*, Mexico City, Mexico.
Title: Higher-dimensional Algebras of type \mathbb{A} and the higher-dimensional Waldhausen S -constructions.
- Jun 2017 **Idun 75. A conference on representation theory of Artin algebras on the occasion of Idun Reiten’s birthday**, *Norges teknisk-naturvitenskapelige universitet (NTNU)*, Trondheim, Norway.
Title: Type \mathbb{A} phenomena in higher Auslander–Reiten theory.
- Sep 2016 **Algebra and Representation Theory in the North (ARTIN) 48**, *Newcastle University*, Newcastle upon Tyne, UK.
Title: Mesh categories of type $\mathbb{Z}\mathbb{A}_\infty$ and tubes in higher Auslander–Reiten theory.
- May 2016 **Second meeting of the US-Mexico Conference on Representation theory, Categorification, and Noncommutative Algebra**, *University of Southern California*, Los Angeles CA, USA.
Title: Higher Nakayama Algebras

- Mar 2016 **Cluster Algebras and Geometry**, *Westfälische Wilhelms-Universität Münster*, Münster, Germany.
Title: Higher Nakayama Algebras.
- Oct 2015 **Jornadas de Álgebra 2015**, *Instituto de Matemáticas, Universidad Nacional Autónoma de México (IM-UNAM)*, Mexico City, Mexico.
Title: From G-sets to dg modules.
- Jul 2015 **Workshop: Silting theory and related topics**, *Università degli Studi di Verona*, Verona, Italy.
Title: τ -rigid finite algebras.
- Jun 2015 **Advances in Representation Theory of Algebras (ARTA) IV**, *Centro de Investigación en Matemáticas, A.C. (CIMAT)*, Guanajuato, Mexico.
Title: From higher Auslander-Reiten theory to higher homological algebra.
- Mar 2015 **Maurice Auslander International Conference**, *Woods Hole Oceanographic Institute*, Woods Hole MA, USA.
Title: The d -abelian property of d -cluster-tilting subcategories.
- Dec 2014 **Homological Interactions between Representation Theory and Singularity Theory**, *University of Edinburgh*, Edinburgh, Scotland.
Title: Towards higher homological algebra.
- [Contributed talks](#)
- Jan 2020 **Workshop: Representation Theory of Quivers and Finite Dimensional Algebras**, *Mathematisches Forschungsinstitut Oberwolfach*, Oberwolfach, Germany.
Title: The symplectic geometry of higher Auslander algebras.
- Sep 2019 **Workshop: Tilting Theory, Singularity Categories & Noncommutative Resolutions**, *BIRS/Casa Matemática Oaxaca*, Oaxaca, Mexico.
Title: The symplectic geometry of higher Auslander algebras.
- Aug 2018 **XVIII International Conference on Representations of Algebras (ICRA)**, *Faculty of Mathematics and Physics, Charles University / Faculty of Electrical Engineering, Czech Technical University in Prague*, Prague, Czech Republic.
Title: Higher-dimensional Algebras of type \mathbb{A} and the higher-dimensional Waldhausen S-constructions.
Notes: Plenary talk delivered as one of the recipients of the ICRA Award 2018.
- Sep 2017 **Advances in Representation Theory of Algebras VI: Geometry and Homology (ARTA VI)**, *Centre International de Rencontres Mathématiques (CIRM)*, Luminy, France.
Title: Triangulations of cyclic apeirotopes and higher dimensional tilting combinatorics.
- Feb 2017 **Workshop: Representation Theory of Quivers and Finite Dimensional Algebras**, *Mathematisches Forschungsinstitut Oberwolfach*, Oberwolfach, Germany.
Title: Spherical objects in higher Auslander-Reiten theory.
- Oct 2015 **Workshop: Preprojective Algebras Interacting with Singularities, Cohen-Macaulay Modules and Weighted projective Spaces**, *BIRS/Casa Matemática Oaxaca*, Oaxaca, Mexico.
Title: Higher Nakayama Algebras
- Aug 2015 **BIREP Summer School on Koszul Duality**, *Hotel Waldcafé Jäger*, Bad Driburg, Germany.
Title: Koszulity and the Hilbert series of preprojective algebras, after Pavel Etingof and Ching-Hwa Eu.
- May 2015 **'Tell us about...'** Seminar, *Institut Mittag-Leffler*, Djursholm, Sweden.
Title: An introduction to τ -tilting theory.
Notes: The 'Tell us about...' Seminar was one of the running seminars during the Representation Theory Program in 2015 at Institut Mittag-Leffler.

- Aug 2014 **XVI International Conference on Representations of Algebras (ICRA)**, *Tsinghua Sanya International Mathematics Forum*, Sanya, China.
Title: n -abelian categories and n -exact categories.
- Nov 2013 **Perspectives of Representation Theory of Algebras. Conference honoring Kunio Yamagata on the occasion of his 65th birthday**, *Nagoya University*, Nagoya, Japan.
Title: On the simplicial complex associated with support τ -tilting modules.
- Oct 2013 **Oberwolfach Seminar: Cluster Algebras and Representation Theory**, *Mathematisches Forschungsinstitut Oberwolfach*, Oberwolfach, Germany.
Title: τ -tilting theory.
- Jun 2013 **16th Workshop on Representation Theory of Algebraic Groups and Quantum Groups**, *Goura, Japan*.
Title: Reduction of τ -tilting modules and torsion classes.
- Sep 2012 **45th Symposium in Ring Theory and Representation Theory**, *Shinshuu University*, Matsumoto, Japan.
Title: Cluster-tilted algebras of canonical type and quivers with potentials.
- Aug 2012 **XV International Conference on Representations of Algebras (ICRA)**, *Bielefeld University*, Bielefeld Germany.
Title: τ -tilting reduction.
- May 2012 **15th Workshop on Representation Theory of Algebraic Groups and Quantum Groups**, *Nagano, Japan*.
Title: Cluster-tilted algebras of canonical type and quivers with potential.
- Aug 2010 **XIV International Conference on Representations of Algebras (ICRA)**, Tokyo, Japan.
Title: The extended affine Lie algebra associated with a connected non-negative unit form.

Seminar talks

- Jul 2020 **Universität Paderborn (postponed due to COVID-19 pandemic)**, *Oberseminar Algebra*, Paderborn, Germany.
Title: TBD.
- Jun 2020 **Institut Henri Poincaré (online due to COVID-19 pandemic)**, *Séminaire d'Algèbre de l'Institut de Mathématiques de Jussieu*, Paris, France.
Title: The symplectic geometry of higher Auslander algebras.
- May 2020 **Rheinische Friedrich-Wilhelms-Universität Bonn (online due to COVID-19 pandemic)**, *Oberseminar Darstellungstheorie*, Bonn, Germany.
Title: Generalised BGP reflection functions via recollements.
- Apr 2020 **Sapienza - Università di Roma (online due to COVID-19 pandemic)**, *Paris Algebra Seminar*, Rome, Italy.
Title: The symplectic geometry of higher Auslander algebras.
- Feb 2020 **Università degli Studi di Verona**, *Seminario Padova - Verona MALGA (Moduli, Algebra, Anelli)*, Verona, Italy.
Title: Generalised BGP reflection functors via the Grothendieck construction.
- Feb 2020 **Università degli Studi di Verona**, *Reading Course on Higher Categories*, Verona, Italy.
Five Lectures on 'Stable ∞ -categories in representation theory'.
- Feb 2020 **University College London**, *KCL/UCL Geometry seminar*, London, United Kingdom.
Title: The symplectic geometry of higher Auslander algebras.
- Dec 2019 **Uppsala University**, *Algebra and Geometry Seminar*, Uppsala, Sweden.
Title: The symplectic geometry of higher Auslander algebras.
- Nov 2019 **Universität Bielefeld**, *BIREP Seminar*, Bielefeld, Germany.
Title: The symplectic geometry of higher Auslander algebras.

- Feb 2019 **Universität Stuttgart**, *Oberseminare am IAZ*, Stuttgart, Germany.
Title: Generalised BGP reflection functors via recollements.
- Dec 2018 **Université Paris Diderot (Paris 7)**, *Séminaire du groupe de travail sur la théorie de Auslander–Reiten de dimension supérieure*, Paris, France.
Title: Combinatorial derived equivalences.
- Dec 2018 **Institut Henri Poincaré**, *Séminaire d'Algèbre de l'Institut de Mathématiques de Jussieu*, Paris, France.
Title: On the Dold–Kan correspondence.
- Nov 2018 **University of Glasgow**, *Algebra Seminar*, Glasgow, Scotland, UK.
Title: On the Dold–Kan correspondence.
- Feb 2018 **Freie Universität Berlin**, *Diskrete Geometrie Seminar*, Berlin, Germany.
Title: Triangulations of cyclic polytopes and simplicial combinatorics.
- Oct 2017 **University of California, Berkeley**, *The UC Berkeley combinatorics seminar*, Berkeley CA, USA.
Title: Triangulations of even-dimensional cyclic apeirotopes and representations of partially ordered sets.
- Jun 2017 **Universität zu Köln**, *Oberseminar Algebra und Zahlentheorie*, Cologne, Germany.
Title: τ^2 -stable tilting complexes over weighted projective lines.
- Apr 2017 **Universität Stuttgart**, *Oberseminare am IAZ*, Stuttgart, Germany.
Title: Spherical objects in higher Auslander–Reiten theory.
- Oct 2016 **Universität Bielefeld**, *Bielefeld, Germany*, BIREP Seminar.
Title: Mesh categories of type \mathbb{A}_∞ and tubes in higher Auslander–Reiten theory.
- Jan 2016 **Rheinische Friedrich-Wilhelms-Universität Bonn**, *Oberseminar Darstellungstheorie*, Bonn, Germany.
Title: Higher Nakayama Algebras.
- Nov 2015 **Universität Stuttgart**, *Oberseminare am IAZ*, Stuttgart, Germany.
Title: A short proof of the defect formula for d -exact sequences.
- Oct 2015 **Universidad Nacional Autónoma de México (IM-UNAM)**, *Seminario de teoría de representaciones*, Mexico City, Mexico.
Title: Reducción de módulos τ -inclinantes.
- Oct 2015 **Universidad Nacional Autónoma de México (IM-UNAM)**, *Seminario de teoría de representaciones*, Mexico City, Mexico.
Title: Una introducción a la teoría τ -inclinante.
- Sep 2015 **Universidad Nacional Autónoma de México (IM-UNAM)**, *Seminario de teoría de representaciones*, Mexico City, Mexico.
Title: Sobre algunas generalizaciones en álgebra homológica I y II.
- Jul 2015 **Universität Stuttgart**, *Oberseminare am IAZ*, Stuttgart, Germany.
Title: Higher Nakayama Algebras.
- Jun 2015 **Norges teknisk-naturvitenskapelige universitet (NTNU)**, *Algebra Seminar*, Trondheim, Norway.
Title: Frobenius d -exact categories.
- May 2015 **Rheinische Friedrich-Wilhelms-Universität Bonn**, *Oberseminar Darstellungstheorie*, Bonn, Germany.
Title: τ -rigid finite algebras.
- May 2015 **Mälardalens högskola**, *Higher Seminar in Mathematics/Applied Mathematics*, Västerås, Sweden.
Title: Cluster algebras.

- Mar 2015 **Nagoya University**, *Research Seminar on Representation Theory*, Nagoya, Japan.
Title: Higher Auslander–Reiten theory, revisited.
- Jan 2015 **Universität Stuttgart**, *Oberseminare am IAZ*, Stuttgart, Germany.
Title: An introduction to τ -tilting theory I and II.
- Oct 2014 **Universität Bielefeld**, *BIREP Seminar*, Bielefeld, Germany.
Title: n -abelian categories.
- Oct 2014 **Rheinische Friedrich-Wilhelms-Universität Bonn**, *Oberseminar Darstellungstheorie*, Bonn, Germany.
Title: n -abelian categories.
- Mar 2012 **Nagoya University**, *Research Seminar in Representation Theory*, Nagoya, Japan.
Title: 2-Representation-finite quasi-canonical algebras.
- Nov 2011 **Nagoya University**, *Research Seminar in Representation Theory*, Nagoya, Japan.
Title: The growth of a cluster algebra of tubular type.
- Jun 2010 **Seminario Conjunto Morelia–México de Teoría de Representaciones de Álgebras**, *Instituto de Matemáticas, Universidad Nacional Autónoma de México (IM-UNAM)*, Mexico City, Mexico.
Title: Álgebras de Lie de tipo afín extendido.