

# Teresa Conde

Curriculum Vitæ

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## Personal data

Full name Teresa Gomes Cipriano Nabais Conde  
Nationality Portuguese

## Contact information

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## Employment

04/2020–03/2022 *Deutsche Forschungsgemeinschaft Postdoc*  
[University of Stuttgart](#), Germany  
Position and travel funding provided by grant DFG no. KO 1281/18-1  
Principal investigator: Prof. Steffen Koenig  
10/2019–03/2020 *Scientific Assistant at IAZ*  
[University of Stuttgart](#), Germany  
Assistant to Prof. Anne Henke  
10/2018–09/2019 *Deutsche Forschungsgemeinschaft Postdoc*  
[University of Stuttgart](#), Germany  
Position and travel funding provided by grant DFG no. KO 1281/14-1  
Principal investigator: Dr. Steffen Koenig  
10/2016–09/2018 *Scientific Assistant at IAZ*  
[University of Stuttgart](#), Germany  
Assistant to Prof. Anne Henke

## Education

10/2012–09/2016 *PhD in Mathematics*  
[University of Oxford](#), United Kingdom  
Thesis title: On certain strongly quasihereditary algebras  
Supervisor: Prof. Karin Erdmann  
Defended on 21 November 2016  
01/2015–04/2015 *Visiting PhD student*  
[Norwegian University of Science and Technology \(NTNU\)](#), Trondheim, Norway  
09/2010–07/2012 *MSc in Mathematics*  
[University of Coimbra](#), Portugal  
Grade: 19/20 (Excellent)  
Thesis topic: Cellular algebras and the Brauer algebra  
Supervisors: Prof. Ana Paula Santana, Dr. Ivan Yudin  
09/2007–07/2010 *BSc in Mathematics*  
[University of Coimbra](#), Portugal  
Grade: 18/20 (Excellent)

## Papers

Preprints *All quasihereditary algebras with a regular exact Borel subalgebra*  
ArXiv e-print: 2010.04139 (2020).  
*All exact Borel subalgebras and all directed bocses are normal*  
ArXiv e-print: 2010.04128 (2020).  
Published *Gabriel–Roiter measure, representation dimension and rejective chains*  
The Quarterly Journal of Mathematics (2020), 71, no. 2, pp. 619–635

*The Ringel dual of the Auslander-Dlab-Ringel algebra* (joint with K. Erdmann)  
Journal of Algebra (2018), 504, pp. 506–535.

*$\Delta$ -Filtrations and Projective Resolutions for the Auslander–Dlab–Ringel Algebra*  
Algebras and Representation Theory (2018), 21, no. 3, pp. 605–625.

*The quasihereditary structure of the Auslander-Dlab-Ringel algebra*  
Journal of Algebra (2016), 460, pp. 181–202.

In preparation *Idempotents,  $A_\infty$ -categories and corings* (joint with J. Külshammer).

Thesis *On certain strongly quasihereditary algebras*  
PhD thesis, University of Oxford (2016).

## Distinctions

August 2018 *Teaching Award for the best core course in Mathematics*  
Attributed by the Mathematics Student Association of the University of Stuttgart to the course Lineare Algebra und Analytische Geometrie I, for which I worked as an assistant.

February 2017 *Oberwolfach Leibniz Graduate Student*  
Funding and invitation to the Workshop on Representation Theory of Quivers and Finite Dimensional Algebras, Oberwolfach, Germany.

01/2013–09/2016 *PhD Scholarship*  
Foundation for Science and Technology, Portuguese Ministry for Education and Science.

01/2015–04/2015 *Travel Grant from the Alice Horsman Fund*  
Somerville College, University of Oxford, to support research stay at NTNU.

01/2015–04/2015 *Financial support from the Algebra Group at NTNU*  
To support research stay at NTNU.

2012 *Renato Pereira Coelho Prize*  
Attributed to the student completing the MSc in Mathematics at the University of Coimbra with the highest grade.

2010 *João Farinha Prize*  
Attributed to the student completing the BSc in Mathematics at the University of Coimbra with the highest grade.

2008/2010 *Young Talents in Mathematics Fellowship* ( $\times 2$ )  
Calouste Gulbenkian Foundation, attributed each academic year to 20 undergraduate students taking a math-related course at a Portuguese university.

2009/2010 *Initiation to Research Fellowship*  
Foundation for Science and Technology, Portuguese Ministry for Education and Science (declined to accept the Young Talents in Mathematics Fellowship).

2007/2008 *Merit Award of the University of Coimbra*  
Attributed each academic year to the students with the highest grades.

## Talks [R = own research, I = invited, O=remote online talk]

27/10/2020 *Quasihereditary algebras with exact Borel subalgebras* [R,O]  
Oberseminar Algebra, University of Stuttgart.

21/08/2020 *The Gabriel-Roiter measure and the finiteness of the representation dimension* [R,I,O]  
Encuentro Virtual de Álgebra Homológica, Argentina.

16/07/2019 *Irreducible characters and the Ziegler spectrum of a locally coherent category*  
Working group on characters of additive categories, University of Stuttgart.

07/05/2019 *Locally finitely presented additive categories I*  
Working group on characters of additive categories, University of Stuttgart.

09/04/2019 *The Gabriel-Roiter measure and the finiteness of the representation dimension* [R,I]  
Oberseminar Algebra, University of Stuttgart.

03/04/2019 *Gabriel–Roiter measure, representation dimension and rejective chains* [R,I]  
Algebra, Combinatorics and Number Theory Seminar, University of Porto, Portugal.

- 06/02/2019 *Gabriel–Roiter measure and the finiteness of representation dimension* [R,I]  
Seminar on Representation Theory of Algebras, University of Bielefeld, Germany.
- 15/12/2018 *The Gabriel–Roiter measure revisited* [R,I]  
Workshop on Representation Theory and related areas, Lisbon, Portugal.
- 30/10/2018 *Gabriel–Roiter measure: The take-off part and some fundamental results* (2 talks)  
Working group on the Gabriel–Roiter measure, University of Stuttgart.
- 15/08/2018 *Ringel duality through examples* (30 min. talk) [R]  
18<sup>th</sup> International Conference on Representations of Algebras (ICRA 2018), Prague, Czech Republic.
- 22/05/2018 *Exact categories of finite type and Iwanaga–Gorenstein algebras*  
Working group on exact categories and algebras of finite Cohen-Macaulay type, University of Stuttgart.
- 30/01/2018 *Two results towards the classification of Schur algebras of finite type*  
Working group on representation type of Schur algebras, University of Stuttgart.
- 23/05/2017 *Auslander’s bijection: from right determined morphisms to submodules of Hom-spaces*  
Working group on Auslander’s Philadelphia notes, University of Stuttgart.
- 22/02/2017 *(Strongly) quasihereditary algebras and Ringel duality* (30 min. talk) [R,I]  
Workshop on Representation Theory of Quivers and Finite Dimensional Algebras, Oberwolfach, Germany.
- 03/02/2017 *Strongly quasihereditary algebras* [R,I]  
Seminar on Representation Theory of Algebras, University of Bielefeld, Germany.
- 04/01/2017 *The ADR algebra and other strongly quasihereditary algebras* [R,I]  
CMUC Algebra and Combinatorics Seminar, University of Coimbra, Portugal.
- 08/11/2016 *Introductory talk on quasihereditary covers*  
Working group on quasihereditary covers and Schur algebras, University of Stuttgart.
- 25/10/2016 *The ADR algebra and other strongly quasihereditary algebras* [R,I]  
Oberseminar Algebra, University of Stuttgart.
- 03/06/2016 *(Strongly) quasihereditary algebras* [R]  
Junior Algebra and Representation Theory Seminar, University of Oxford.
- 2015/2016 *Mutations in triangulated categories and rigid Cohen-Macaulay modules* (4 talks)  
Working group on mutations in triangulated categories, University of Oxford.
- 02/12/2015 *Representation dimension and quasihereditary algebras*  
Algebra Kinderseminar, University of Oxford.
- 20/11/2015 *On certain strongly quasihereditary algebras* [R,I]  
University of Kent Algebra Seminar, Canterbury, United Kingdom.
- 20/06/2015 *The derived category of (commutative) DG algebras*  
Anglo-Franco-German Representation Theory Network Summer School, Isle of Skye, United Kingdom.
- 20/04/2015 *The quasihereditary structure of a Schur-like algebra* [R,I]  
University of East Anglia Pure Maths Research Seminar, Norwich, United Kingdom.
- 04/02/2015 *The quasihereditary structure of a Schur-like algebra* [R,I]  
NTNU Algebra Seminar, Trondheim, Norway.
- 05/11/2014 *Cluster algebras of finite type*  
Algebra Kinderseminar, University of Oxford.
- 23/07/2014 *The quiver of a special endomorphism algebra* (30 min. talk) [R]  
Kent Algebra Days – Young Researchers 2014, Canterbury, United Kingdom.
- 30/01/2014 *Introductory talk on cluster algebras*  
Working group on cluster algebras, University of Oxford.
- 10/11/2010 *Representations of finite groups and applications* (in Portuguese) [I]  
V Simpósio Nacional / Jornadas de Iniciação Científica, IMPA, Rio de Janeiro, Brazil.

12/09/2009 *Character tables and applications to group theory* (in Portuguese)  
Young Talents in Mathematics Annual Meeting, Porto, Portugal.

## Teaching experience

WiSe 2019/2020 *Lineare Algebra und Analytische Geometrie I*  
Assistant to Prof. Anne Henke in first year course on Linear Algebra for Mathematics students at the University of Stuttgart. Duties included organising and conducting Vortragsübung classes (in German), preparing weekly problem sheets and online quizzes, meeting weekly with tutors, providing office hours, producing exams and tests, exam and test invigilation, marking and checking of exams and tests, providing exam feedback to students and coordinating student registration.

WiSe 2017/2018 *Lineare Algebra und Analytische Geometrie I*  
SoSe 2018 *Lineare Algebra und Analytische Geometrie II*  
Assistant to Prof. Steffen Koenig in first year course on Linear Algebra for Mathematics students at the University of Stuttgart. Duties included organising and conducting Lernwerkstatt classes (in German), preparing weekly problem sheets, liaising with tutors, providing office hours, producing final exams and tests, exam and test invigilation, marking and checking of exams and tests, providing exam feedback to students, acting as second examiner for oral exams, coordinating student registration and the set-up of the online quizzes.

WiSe 2016/2017 *Höhere Mathematik I*  
SoSe 2017 *Höhere Mathematik II*  
Assistant to Prof. Markus Stroppel in first year course on Linear Algebra and Analysis for Engineering students at the University of Stuttgart. Duties included preparing weekly online quizzes, providing office hours, producing problem sheets and exams, exam invigilation, marking and checking of exam scripts, providing exam feedback to students and acting as second examiner for oral exams.

MT 2015 *B2a: Introduction to Representation Theory*  
Class tutor of third year course on Representation Theory for Mathematics students at the University of Oxford. Duties included conducting classes where the solutions of the problem sheets were presented, liaising with the teaching assistant and reporting on the progress of the students.

TT 2014 *C2.1b: Representation Theory of Symmetric Groups*  
Consultation sessions tutor of fourth year course (Masters level) on Representation Theory for Mathematics students at the University of Oxford. Duties included conducting revision classes, demonstrating solutions of previous exams and addressing difficulties raised by the students in advance.

MT 2012, 2013 *B2a: Introduction to Representation Theory*  
HT 2013, 2014 *C2.1b: Representation Theory of Symmetric Groups*  
Teaching assistant to Prof. Anne Henke in third and fourth year (Masters level) courses on Representation Theory for Mathematics students at the University of Oxford. Duties included marking work, demonstrating some solutions on the board, liaising with the class tutor and reporting on the progress of the students.

2011/2012 *Projecto Delfos*  
Demonstrator in sessions aimed at preparing school students for the Mathematics Olympiads and fostering their interest in Mathematics, University of Coimbra.

## Professional service

Referee Journal of Algebra, Algebras and Representation Theory, Journal of Combinatorial Theory Series A, International Electronic Journal of Algebra.

Reviewer MathSciNet

Main organiser Working group on characters of additive categories (SoSe 2019), working group on Gabriel–Roiter measure (WiSe 2018/2019) and working group on quasihereditary covers and Schur algebras (WiSe 2016/2017), University of Stuttgart.

Local organiser Algebraic Representation Theory – a workshop in honour of Richard Dipper on the occasion of his retirement, July 2018.

Other                      Somerville College undergraduate admission interviews in Mathematics, University of Oxford, December 2015.  
Assistance at the 63<sup>rd</sup> BLOC Meeting in honour of Karin Erdmann's 65<sup>th</sup> birthday, October 2013.

### Selected conferences

August 2019              *Two weeks of silting*, Stuttgart, Germany.  
May 2019                 *Homotopy meets homology*, Dublin, Ireland.  
August 2018             *18<sup>th</sup> International Conference on Representations of Algebras (ICRA 2018)*, Prague, Czech Republic.  
July 2018                *Algebraic Representation Theory – a workshop in honour of Richard Dipper on the occasion of his retirement*, Stuttgart, Germany.  
May 2017                *Idun 75*, Trondheim, Norway.  
February 2017         *Workshop on Representation Theory of Quivers and Finite Dimensional Algebras*, Oberwolfach, Germany.  
March 2016             *Triangulated Categories in Algebra, Geometry and Topology*, Stuttgart, Germany.  
June 2015                *Conference in honour of Dave Benson's 60<sup>th</sup> birthday*, Isle of Skye, United Kingdom.  
June 2015                *Anglo-Franco-German Representation Theory Network Summer School*, Isle of Skye, United Kingdom.  
June 2015                *Summer School on Representation Theory*, Coimbra, Portugal.  
June 2015                *AMS-EMS-SPM International Meeting 2015*, Porto, Portugal.  
July 2014                *Kent Algebra Days – Young Researchers 2014*, Canterbury, United Kingdom.  
June 2014                *Workshop “Non-crossing partitions in Representation Theory”*, Bielefeld, Germany.  
October 2013            *63<sup>rd</sup> BLOC Meeting in honour of Karin Erdmann's 65<sup>th</sup> birthday*, Oxford, United Kingdom.

### Additional Skills

Languages                Portuguese (native speaker), English (fluent), German (intermediate), Spanish (listening, reading).

Last updated: 1 November, 2020.