

Jorge Vitória

PhD

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Personal Information

Date of Birth 25 September 1984
Nationality Portuguese
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University

10/2006-09/2010 **PhD in Mathematics**, University of Warwick, Coventry, UK, Supervisor: Dr. Dmitriy Rumynin.
09/2002-06/2006 **Lic. in Mathematics**, University of Porto, Porto, Portugal.

Employment

07/2016-03/2019 **Postdoctoral researcher**, City, University of London, London, United Kingdom, Advisor: Prof. Joseph Chuang.
Funded by Prof. Joseph Chuang's EPSRC project: *Derived Localisation in Algebra and Homotopy Theory*
09/2015-06/2015 **Postdoctoral researcher**, University of Verona, Verona, Italy, Advisor: Prof. Lidia Angeleri Hügel.
Funded by the department of Computer Science of the University of Verona. Project: *Large tilting and cotilting objects in derived categories*
09/2013-08/2015 **Marie Curie fellow**, University of Verona, Verona, Italy, Advisor: Prof. Lidia Angeleri Hügel.
Intra-European Fellowship, funded within the 7th European Framework Program. Project: *Tilting theory in derived module categories*
04/2013-08/2013 **Postdoctoral researcher**, University of Bielefeld, Bielefeld, Germany, Advisor: Prof. Henning Krause.
Funded by the German Research Council through the Collaborative Research Centre 701 (DFG-SFB 701)
10/2010-03/2013 **Postdoctoral researcher**, University of Stuttgart, Stuttgart, Germany, Advisor: Prof. Steffen Koenig.
Funded by the German Research Council through the priority program in Representation Theory (DFG - SPP 1388)

Research

Research Interests

Representation theory of associative algebras
Derived categories
Tilting and silting theory
Torsion pairs in abelian and triangulated categories

Publications

- (1) *Silting modules and ring epimorphisms* (joint with L. Angeleri Hügel and F. Marks), Adv. Math. 303 (2016), 1044–1076.
- (2) *Silting modules* (joint with L. Angeleri Hügel and F. Marks), Int. Math. Res. Not. IMRN 2016 (2016), no. 4, 1251–1284.
- (3) *From ring epimorphisms to universal localisations* (joint with F. Marks), Forum Math. 27, no.2 (2015), 1139–1161.
- (4) *Glueing Silting objects* (joint with Q. Liu and D. Yang), Nagoya Math. J. 216 (2014), 117–151.
- (5) *Perverse coherent t-structures through torsion theories*, Algebr. Represent. Th. 17, no. 4 (2014), 1181–1206.
- (6) *Recollements of Module Categories* (joint with C. Psaroudakis), Appl. Categ. Structures 22, no.4 (2014), 579–593.
- (7) *t-structures via recollements for piecewise hereditary algebras* (joint with Q. Liu), J. Pure and Appl. Algebra 216, no.4 (2012), 837–849.
- (8) *Mutations Vs. Seiberg duality*, J. Algebra 321 (2009), no. 3, 816–828.

Preprints

Torsion pairs in silting theory (joint with L. Angeleri Hügel and F. Marks), preprint (2016), 14 pages, arXiv:1611.08139.

Realisation functors in tilting theory (joint with C. Psaroudakis), preprint (2015), 41 pages, arXiv:1511.02677.

Grants

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| 09/2015-06/2016 | Postdoctoral Fellowship from the Department of Computer Sciences, University of Verona, Project: <i>Large Tilting and Cotilting objects in derived categories</i> . |
| 09/2013-08/2015 | Marie Curie Intra-European Fellowship from the 7th Framework Program of the European Union, Project: <i>Tilting theory in derived module categories</i> . |
| 10/2006-09/2010 | PhD Scholarship, Foundation for Science and Technology (Portugal). |
| 11/2004-04/2005 | Initiation to Research Scholarship, Centre for Mathematics of the University of Porto. |
| 11/2003-08/2004 | Initiation to Research Scholarship, <i>Novos talentos em Matemática</i> , Gulbenkian Foundation (Portugal) |
| 11/2002-08/2003 | Initiation to Research Scholarship, <i>Novos talentos em Matemática</i> , Gulbenkian Foundation (Portugal) |

Seminars, conferences and research visits

Selected invited talks

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| 11/2016 | <i>Silting modules and ring epimorphisms</i> , University of Kent, Canterbury, United Kingdom. |
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- 09/2016 *Support tilting modules and ring epimorphisms for hereditary rings*, University of Lancaster, Lancaster, United Kingdom.
- 07/2016 *TTF-triples in silting theory*, University of Stuttgart, Stuttgart, Germany
- 05/2016 *Derived Morita theory for Grothendieck categories*, The University of Manchester, Manchester, United Kingdom.
- 09/2015 *Support tilting modules and ring epimorphisms*, Congress of Young Researchers of the Royal Spanish Mathematical Society, University of Murcia, Spain.
- 03/2015 *(Co)Sifting, (Co)tilting, t-structures and derived equivalences*, Norwegian University of Science and Technology, Trondheim, Norway.
- 12/2014 *An introduction to silting theory*, Homological Interactions between Representation Theory and Singularity Theory, University of Edinburgh, UK.
- 12/2014 *Silting, tilting, t-structures and derived equivalences*, Workshop on categorical and homological methods for associative algebras and rings, University of Murcia, Spain.
- 09/2014 *Tilting theory and equivalences of recollements*, University of Stuttgart, Germany.
- 04/2014 *Large silting complexes*, University of Santiago de Compostela, Spain.
- 06/2013 *Recollements of module categories*, Recent trends in rings and algebras, University of Murcia, Spain.
- 05/2013 *Ring Epimorphisms and Universal Localisations and Recollements of module categories*, Mini-Workshop: Localising and Tilting in Abelian and Triangulated Categories, Oberwolfach, Germany.
- 03/2013 *Localisations of rings in representation theory*, University of Verona, Italy.
- 10/2012 *Ring epimorphisms and universal localisations*, University of Bielefeld, Germany.
- 07/2012 *From ring epimorphisms to universal localisations*, University of Porto, Portugal.
- 06/2012 *Glueing silting objects*, University of Bonn, Germany.
- 03/2012 *t-structures, recollements and silting objects*, Annual meeting of the DFG priority program on representation theory, Thurnau, Germany.
- 03/2012 *Silting objects and t-structures in derived categories*, University of Verona, Italy.
- 07/2011 *Algebraic t-structures for piecewise hereditary algebras*, Workshop on t-structures and related topics, University of Stuttgart, Germany.
- 02/2011 *Bounded t-structures for piecewise hereditary algebras*, Hausdorff Research Institute for Mathematics, Bonn, Germany.
- 07/2010 *Equivalences for noncommutative projective spaces*, University of Shizuoka, Japan.
- 06/2010 *Perverse coherent t-structures via torsion theories*, University of Cologne, Germany.
- 05/2010 *Equivalences for noncommutative projective spaces*, IST Lisbon, Portugal
- 05/2009 *Constructing perverse coherent t-structures*, International Centre for Mathematics/Portuguese Mathematical Society Afternoons: Ring Theory and Applications, Coimbra, Portugal
- 10/2007 *Mutations Vs. Seiberg duality*, University of Leeds, UK.

Research visits

- 11/2016 University of Verona, Verona, Italy.

- 09/2016 University of Lancaster, Lancaster, United Kingdom.
- 07/2016 University of Stuttgart, Stuttgart, Germany.
- 05/2016 City University London, London, United Kingdom.
- 05/2016 The University of Manchester, Manchester, United Kingdom.
- 03/2015 Norwegian University of Science and Technology, Trondheim, Norway.
- 08/2014 Nanjing Normal University, Nanjing, China.
- 03/2013 University of Verona, Verona, Italy.
- 10/2012 University of Bielefeld, Bielefeld, Germany.
- 03/2012 University of Verona, Verona, Italy.
- 02/2011 Hausdorff Research Institute for Mathematics, Bonn, Germany.
- 07/2010 University of Shizuoka, Shizuoka, Japan.

Co-organisation of conferences

- 03/2016 *Triangulated categories in Representation Theory, Geometry and Topology*, Stuttgart, Germany.
- 07/2015 *Silting Theory and related topics*, Verona, Italy.
- 03/2013 *Annual meeting of the DFG priority program on representation theory* (local organiser), Bad Boll, Germany.
- 07/2011 *Workshop on t-structures and related topics*, Stuttgart, Germany.

Selected conferences attended

- 03/2016 *Triangulated categories in Representation Theory, Geometry and Topology*, Stuttgart, Germany.
- 09/2015 *Congress of Young Researchers of the Royal Spanish Mathematical Society*, Murcia, Spain.
- 09/2015 *Dèrivateurs à Barcelona*, Barcelona, Spain.
- 07/2015 *Silting Theory and related topics*, Verona, Italy.
- 12/2014 *Homological Interactions between Representation Theory and Singularity Theory*, Edinburgh, UK.
- 12/2014 *Workshop on categorical and homological methods for associative algebras and rings*, Murcia, Spain.
- 08/2014 *International Conference on Representations of Algebras*, Sanya, China.
- 06/2014 *Algebraic Structures and Their Applications*, Spineto (Siena), Italy.
- 05/2013 *Mini-workshop: Localising and tilting in Abelian and Triangulated Categories*, Oberwolfach, Germany
- 03/2013 *Annual meeting of the DFG priority program on representation theory* (local organiser), Bad Boll, Germany.
- 08/2012 *International Conference on Representations of Algebras*, Bielefeld, Germany.
- 03/2012 *Annual meeting of the DFG priority program on representation theory*, Thurnau, Germany.
- 07/2011 *Workshop on t-structures and related topics*, Stuttgart, Germany.

- 03/2011 *Interactions of Representation Theory with Geometry and Combinatorics*, Bonn, Germany.
- 08/2010 *New trends in noncommutative algebra*, Seattle, USA.
- 04/2008 *Homological Methods in Representation Theory*, Berkeley, USA.
- 01/2008 *Categorification and Cluster Theory*, Oxford, UK.

Teaching

Teaching experience

- Autmun 2016 *Representation Theory*, Invited lectures for Master students, University of Verona, Italy.
- Spring 2016 *Tilting Theory*, Lecture series for PhD students, University of Verona, Italy.
- Spring 2016 *Linear Algebra with elements of Geometry*, Lectures, University of Verona, Italy.
- Autumn 2015 *Algebra*, Exercise classes, University of Verona, Italy.
- Spring 2012 *Localisations in algebra and geometry*, Lecture series for Master students, University of Verona, Italy.
- Autumn 2009 *Ring Theory*, Exercise classes, University of Warwick, UK.
- Autumn 2009 *Rings and modules*, Exercise classes, University of Warwick, UK.
- Autumn 2008 *Rings and modules*, Exercise classes, University of Warwick, UK.
- Spring 2008 *Algebra II: groupd and rings*, Exercise classes, University of Warwick, UK.
- Autumn 2007–Spring 2008 Tutorial supervision, problem sessions with first year students, University of Warwick, UK.

Didactic texts

Aljavas, Caminhos e Representações, part of the collection *Números, cirurgia e nós de gravata: 10 anos de Seminário Diagonal no IST*, IST Press, 2014 (Introductory text in portuguese for undergraduates on the classification of hereditary finite dimensional algebras of finite representation type).

A Visual Introduction to Tilting, part of the collection *Seminario Dottorato 2013/2014*, Dipartimento di Matematica - Università di Padova (Introductory text to classical tilting theory for Master/PhD students, available at http://dottorato.math.unipd.it/sites/default/files/SemDott1314_note.pdf).

Languages

- Portuguese Native
- English Fluent
- Italian Very good
- German Very good