

Curriculum Vitae for Peter Jørgensen

Born in Denmark 12.1970. Danish citizen

Ph.D. from the University of Copenhagen 10.1997

Professor of Mathematics at the University of Newcastle since 09.2006

ADDRESS

School of Mathematics and Statistics
University of Newcastle
Newcastle upon Tyne NE1 7RU
United Kingdom

Phone: +44(0)191 222 7288
Fax: +44(0)191 222 8020
E-mail: peter.jorgensen@ncl.ac.uk

EDUCATION

University of Copenhagen, Ph.D. in Mathematics Thesis: "Synthetic Commutative Algebra"	10.1997
University of Copenhagen, M.Sc. in Mathematics Thesis: "Grothendieck Duality"	05.1994
University of Copenhagen, B.Sc. in Mathematics and Physics	06.1992

EMPLOYMENT

Professor of Mathematics at the University of Newcastle	09.2006–
University Research Fellow at the University of Leeds	09.2003–08.2006
Research Librarian at the Danish Royal Library	01.2002–08.2003
Post Doc. at the University of Copenhagen, interrupted by	02.2000–12.2001
Post Doc. at the University of Bielefeld	09.2000–12.2000
Database Administrator at the Danish Royal Library	02.1999–01.2000
Post Doc. at the University of Copenhagen, interrupted by	10.1997–01.1999
Post Doc. at the University of Antwerp	09.1998–12.1998

RECENT TALKS

Algebra Seminar, University of East Anglia	03.2012
Algebra Seminar, University of Cambridge	11.2011
Algebra Seminars, Jiaotong University	09.2011
Talk at Noncommutative Algebraic Geometry Workshop, Fudan University	09.2011
Talk at Conference on Algebraic Representation Theory, Uppsala University	09.2011
Algebra Seminar, Universities of Verona and Padova	07.2011
Algebra Seminar, University of Bristol	05.2011
Algebra Seminar, University of Edinburgh	11.2010
Talk at the workshop on Algebra, Combinatorics, Dynamics and Applications, Queen's University Belfast	08.2010
Talk at the mini-workshop on clusters, University of Leeds	06.2010

Algebra Seminar, University of Oxford	06.2010
Algebra Seminar, University of Aberdeen	04.2010
Mathematics Colloquium, Queen's University Belfast	11.2009
Algebra Seminar, University of Leeds	11.2009
Algebra Seminar, University of Glasgow	10.2009
Talk at the Workshop on Derived Categories in Algebra, Topology and Geometry, University of Leicester	09.2009
Talk at the Workshop on Non-commutative Algebraic Geometry and Related Topics, Kyoto University	08.2009
Talk at the 25th Nordic and 1st British-Nordic Congress of Mathematicians, Oslo	06.2009
Algebra and Topology Seminar, University of Copenhagen	03.2009

EDITING

I am an editorial adviser for the main publications (Bulletin, Journal, and Proceedings) of the London Mathematical Society.

With Thorsten Holm and Raphaël Rouquier, I edited the book “Triangulated categories”, London Math. Soc. Lecture Note Ser., vol. 375, Cambridge University Press, Cambridge, 2010.

GUEST POSITIONS

Visiting Professor at Osaka Prefecture University	07.2008
---	---------

PH.D. STUDENTS

Daniel Maycock	10.2007–09.2011
Thesis: “Properties of triangular matrix and Gorenstein Differential Graded Algebras”	
Puiman Ng	10.2007–04.2011
Thesis: “Torsion theories and Auslander–Reiten sequences”	
David Pauksztello	10.2004–09.2008
Thesis: “Homological properties of Differential Graded algebras”	

POSTGRADUATE EXAMINATIONS

University of Warwick	12.2010
University of Glasgow	06.2010
University of Leicester	12.2007
University of Newcastle (internal)	06.2007
University of Leeds (internal)	11.2005

TEACHING

Student questionnaire scores are available for most of the following courses upon request.

Undergraduate Algebra Course (24 lectures and ~130 students), Newcastle	2011
Undergraduate Cryptography Course (24 lectures and ~75 students), Newcastle	2011
Undergraduate Algebra Course (24 lectures and ~125 students), Newcastle	2010

Undergraduate Group Theory Course (24 lectures and ~20 students), Newcastle	2009
Undergraduate Algebra Course (24 lectures and ~140 students), Newcastle	2009
Undergraduate Group Theory Course (24 lectures and ~35 students), Newcastle	2008
Undergraduate Algebra Course (24 lectures and ~120 students), Newcastle	2008
Undergraduate Group Theory Course (24 lectures and ~50 students), Newcastle	2007
Undergraduate Algebra Course (24 lectures and ~120 students), Newcastle	2007
Undergraduate Group Theory Course (24 lectures and ~35 students), Newcastle	2006
Undergraduate Group Theory Course (22 lectures and ~140 students), Leeds	2006
Graduate course on Goldie's Theorem, Leeds	2004
Undergraduate Algebra Course (60 lectures and ~100 students), Copenhagen	2001
Undergraduate Algebra Course (60 lectures and ~100 students), Copenhagen	2000
Graduate course based on my lecture notes "Non-commutative projective geometry", Copenhagen	1998
Undergraduate drop in sessions, Copenhagen	1996 and 1998
Numerous smaller classes (algebra, calculus, combinatorics, linear algebra), Copenhagen	1992–1997

I supervised bachelor projects in 2001/2, 2003/4, 2005/6, 2007/8 (twice), and 2008/9.

GRANTS

£700 grant from the London Mathematical Society for visit by Kiriko Kato	11.2011
£3,500 grant from the London Mathematical Society for Conference on Triangulated Categories in Leeds (with Thorsten Holm and Raphaël Rouquier)	08.2006
£5,000 grant from the Leverhulme Trust for Conference on Triangulated Categories in Leeds (with Thorsten Holm and Raphaël Rouquier)	08.2006
£500 grant from the Royal Society for academic visit to Århus	10.2005
Euro 6,000 grant for Post Doc. position in Bielefeld from the European Science Foundation network "Non-commutative Geometry"	09.2000–12.2000
Euro 5,600 grant for Post Doc. position in Antwerp from the EU network "Algebraic Lie Representations"	09.1998–12.1998

ADMINISTRATION ETC.

Acting Director of Research for the School of Mathematics at the University of Newcastle	09.2011–
Member of the School Management Committee for the School of Mathematics at the University of Newcastle	09.2011–
Member of the Publications Committee of the London Mathematical Society	04.2011–
Member of the Research Committee of the School of Mathematics at the University of Newcastle	03.2008–08.2009 and 09.2011–
Member of the Academic Steering Committee of the MAGIC Consortium	04.2007–
Member of the Postgraduate Committee of the School of Mathematics at the University of Newcastle	01.2007–
Postgraduate Selector for Pure Mathematics at the University of Newcastle	01.2007–08.2009

Representative for Pure Mathematics in the Library Committee of Leeds University Library	08.2005–08.2006
Organiser of the Algebra Seminar at the University of Leeds	01.2006–08.2006
Organiser (with Thorsten Holm and Raphaël Rouquier) of Conference on Triangulated Categories at the University of Leeds (satellite conference of the International Congress of Mathematicians 2006)	08.2006
Liaison between the Danish Royal Library and MathSciNet and Zentralblatt MATH	2002–2003
Organiser of the Algebra Seminar at the University of Copenhagen	2000–2001
Member of IT Committees of the Danish Royal Library	1999 and 2002–2003

PUBLICATIONS

The following list is chronologically ordered. The publications are available electronically from my webpage, <http://www.staff.ncl.ac.uk/peter.jorgensen>

- [1] *Serre-duality for Tails(A)*, Proc. Amer. Math. Soc. **125** (1997), 709–716
- [2] *Non-commutative graded homological identities*, J. London Math. Soc. (2) **57** (1998), 336–350
- [3] *Local cohomology for non-commutative graded algebras*, Comm. Algebra **25** (1997), 575–591
- [4] *Non-commutative Castelnuovo-Mumford regularity*, Math. Proc. Cambridge Phil. Soc. **125** (1999), 203–221
- [5] *Brown Representability for stable categories*, Math. Scand. **85** (1999), 195–218
- [6] *Properties of AS-Cohen-Macaulay algebras*, J. Pure Appl. Algebra **138** (1999), 239–249
- [7] *Gorenstein homomorphisms of non-commutative rings*, J. Algebra **211** (1999), 240–267
- [8] *Intersection theory on non-commutative surfaces*, Trans. Amer. Math. Soc. **352** (2000), 5817–5854
- [9] With J. J. Zhang, *Gourmet’s Guide to Gorensteinness*, Adv. Math. **151** (2000), 313–345
- [10] *Spectra of modules*, J. Algebra **244** (2001), 744–784
- [11] *Triangulated functors, homological functors, tilts, and lifts*, Manuscripta Math. **110** (2003), 381–406
- [12] *Non-commutative curves and their zeta functions*, J. Algebra Appl. **1** (2002), 175–199
- [13] With A. Frankild, *Foxby equivalence, complete modules, and torsion modules*, J. Pure Appl. Algebra **174** (2002), 135–147
- [14] With A. Frankild, *Affine equivalence and Gorensteinness*, Math. Scand. **95** (2004), 5–22
- [15] With A. Frankild, *Gorenstein Differential Graded Algebras*, Israel J. Math. **135** (2003), 327–354
- [16] With A. Frankild and S. Iyengar, *Dualizing Differential Graded modules and Gorenstein Differential Graded Algebras*, J. London Math. Soc. (2) **68** (2003), 288–306
- [17] With A. Frankild, *Homological identities for Differential Graded Algebras*, J. Algebra **265** (2003), 114–135
- [18] *Linear free resolutions over non-commutative algebras*, Compositio Math. **140** (2004), 1053–1058
- [19] *Recognizing dualizing complexes*, Fund. Math. **176** (2003), 251–259
- [20] *Auslander-Reiten theory over topological spaces*, Comment. Math. Helv. **79** (2004), 160–182
- [21] *The Auslander-Reiten quiver of a Poincaré duality space*, Algebr. Represent. Theory **9** (2006), 323–336
- [22] *A non-commutative BGG correspondence*, Pacific J. Math. **218** (2005), 357–377
- [23] *Ext vanishing and infinite Auslander-Buchsbaum*, Proc. Amer. Math. Soc. **133** (2005), 1335–1341
- [24] *Auslander-Reiten sequences on schemes*, Ark. Mat. **44** (2006), 97–103.
- [25] *Finite flat and projective dimension*, Comm. Algebra **33** (2005), 2275–2279
- [26] *The homotopy category of complexes of projective modules*, Adv. Math. **193** (2005), 223–232

- [27] *Existence of Gorenstein projective resolutions and Tate cohomology*, J. Eur. Math. Soc. (JEMS) **9** (2007), 59–76
- [28] With H. Holm, *Cohen-Macaulay homological dimensions*, Rend. Sem. Mat. Univ. Padova **117** (2007), 87–112
- [29] With H. Holm, *Semidualizing modules and related Gorenstein homological dimensions*, J. Pure Appl. Algebra **205** (2006), 423–445
- [30] *Symmetry theorems for Ext vanishing*, J. Algebra **301** (2006), 224–239
- [31] *Finite Cohen-Macaulay type and smooth non-commutative schemes*, Canad. J. Math. **60** (2008), 379–390
- [32] *Recollement for Differential Graded Algebras*, J. Algebra **299** (2006), 589–601
- [33] *A new recollement for schemes*, Houston J. Math. **35** (2009), 1071–1077
- [34] *Amplitude inequalities for Differential Graded modules*, Forum Math. **22** (2010), 941–948
- [35] With H. Holm, *Compactly generated homotopy categories*, Homology, Homotopy Appl. **9** (2007), 257–274
- [36] With H. Holm, *Covers, precovers, and purity*, Illinois J. Math. **52** (2008), 691–703
- [37] *Auslander-Reiten triangles in subcategories*, J. K-theory **3** (2009), 583–601
- [38] *Quotients of cluster categories*, Proc. Roy. Soc. Edinburgh Sect. A **140** (2010), 65–81
- [39] *Reflecting recollements*, Osaka J. Math. **47** (2010), 209–213
- [40] With A. J. Frankild, *Homological properties of cochain Differential Graded algebras*, J. Algebra **320** (2008), 3311–3326
- [41] *Calabi-Yau categories and Poincaré duality spaces*, pp. 399–431 in “Trends in Representation Theory of Algebras and Related Topics” (edited by Andrzej Skowroński), European Mathematical Society Publishing House, Zürich, 2008
- [42] With T. Holm, *On the relation between cluster and classical tilting*, J. Pure Appl. Algebra **214** (2010), 1523–1533
- [43] With M. Grime, *Compactly generated relative stable categories*, Algebr. Represent. Theory **14** (2011), 247–251
- [44] With H. Holm, *Rings without a Gorenstein analogue of the Govorov-Lazard Theorem*, Q. J. Math. **62** (2011), 977–988
- [45] With T. Holm, *On a triangulated category of infinite Dynkin type, and the relation to triangulations of the infinity-gon*, Math. Z. **270** (2012), 277–295
- [46] With H. Holm, *Cotorsion pairs induced by duality pairs*, Journal of Commutative Algebra **1** (2009), 621–633
- [47] With K. Kato, *Symmetric Auslander and Bass categories*, Math. Proc. Cambridge Phil. Soc. **150** (2011), 227–240
- [48] With T. Holm, *Triangulated categories: Definitions, properties and examples*, pp. 1–51 in “Triangulated categories” (edited by Holm, Jørgensen, and Rouquier), London Math. Soc. Lecture Note Ser., vol. 375, Cambridge University Press, Cambridge, 2010
- [49] With Y. Palu, *A Caldero-Chapoton map for infinite clusters*, to appear in Trans. Amer. Math. Soc.
- [50] With T. Holm and M. Rubey, *Ptolemy diagrams and torsion pairs in the cluster category of Dynkin type A_n* , J. Algebraic Combin. **34** (2011), 507–523
- [51] *Duality for cochain DG algebras*, to appear in Sci. China Ser. A
- [52] With T. Holm and D. Yang, *Sparseness of t -structures and negative Calabi–Yau dimension in triangulated categories generated by a spherical object*, to appear in Bull. London Math. Soc.
- [53] With D. Pauksztello, *The co-stability manifold of a triangulated category*, to appear in Glasg. Math. J.
- [54] With T. Holm, *Realising higher cluster categories of Dynkin type as stable module categories*, to appear in Q. J. Math.

- [55] With K. Kato, Triangulated categories of extensions and the Second Isomorphism Theorem for triangulated categories, preprint (2012)
- [56] With T. Holm, Cluster tilting vs. weak cluster tilting in Dynkin type A infinity, preprint (2012)