

Curriculum Vitae

APOSTOLOS BELIGIANNIS

Department of Mathematics	Tel: +30 2651 0 08227 (office)
School of Natural Sciences	Tel: +30 2651 0 94973 (home)
University of Ioannina	Fax: +30 2651 0 08203
45110 Ioannina	Email: abeligia@uoi.gr
Greece	abeligia@cc.uoi.gr (old)

Home Page: <http://users.uoi.gr/abeligia/>

MAY 2016

1. Date of Birth: November 7, 1962.
2. Place of Birth: Chalkis, Greece.
3. Married, one son.

1. EMPLOYMENT

- University of Ioannina, Greece: Professor (2015 - present).
- University of Ioannina, Greece: Associate Professor (2006 - 2015).
- University of the Aegean, Greece: Associate Professor (2003 - 2006).
- University of the Aegean, Greece: Visiting Assistant and Associate Professor (2001 - 2002).
- University of the Aegean, Greece: Visiting Lecturer (2000 - 2001).
- University of Bielefeld, Germany: Research Fellow in the program “Orbits, Crystals and Representation Theory”, Germany. (July-October 1998 and January-March 1999).
- Instituto de Matemáticas, UNAM, Mexico: Visiting Assistant Professor (1997-1998).

2. EDUCATION

- 1991–1995: Ph.D. student in the Department of Mathematics, University of Ioannina, Greece.
Advisor: Nikolaos Marmaridis.
Thesis: “*Stable Categories of Abelian Categories*”, (in Greek), Ioannina (1995), 291 pages.
- BSc. in Mathematics (June 1987), University of Ioannina, Greece.

3. RESEARCH INTERESTS

- Representation Theory of Artin Algebras.
In particular: Tilting Theory, Auslander-Reiten Theory.
- Ring and Module Theory.
- Homological Algebra.
In particular: Purity, Relative Homology, Gorenstein Homological Algebra, Triangulated and Derived Categories.
- (Cluster) Tilting Theory.
- Homotopical Algebra.
In particular: Quillen’s Closed Model Categories and Abstract Homotopy Theory.
- Stable Homotopy Theory.
- Category Theory.
In particular: Abelian Categories, Torsion Theories, Localization.
- Non-Commutative Algebraic Geometry.
- Homological/Homotopical Aspects of Functional Analysis.
- Applications of Homological Algebra and Representation Theory to Algebraic Geometry.

4. PUBLISHED PAPERS AND PREPRINTS

4.1. Published Papers.

- [1] A. BELIGIANNIS AND N. MARMARIDIS: “*On Left Derived Categories of a Stable Category*”. Proc. ICRA 6, Carlton-Ottawa Math. Lect. Note Series, No. **14** (1992), p. BM1-BM31.
- [2] A. BELIGIANNIS AND N. MARMARIDIS: “*Left Triangulated Categories Arising from Contravariantly Finite Subcategories*”. Communications in Algebra **22** (1994), 5021–5036.
- [3] A. BELIGIANNIS AND N. MARMARIDIS: “*Grothendieck Groups Arising from Contravariantly Finite Subcategories*”. Communications in Algebra **24** (1996), 4415–4438.
- [4] A. BELIGIANNIS, N. MARMARIDIS AND I. ASSEM: “*Right Triangulated Categories with Right Semi-Equivalences*”. Algebras and Modules II, (Geiranger 1996), CMS Conf. Proc. **24**, Amer. Math. Soc., Providence RI, (1998), 17–37.
- [5] A. BELIGIANNIS: “*Relative Homological Algebra and Purity in Triangulated Categories*”. Journal of Algebra **227** (2000), 268–361.
- [6] A. BELIGIANNIS: “*Cleft Extensions of Abelian Categories and Applications to Ring Theory*”. Communications in Algebra **28** (2000), 4503–4546.
- [7] A. BELIGIANNIS: “*On the Relative Homology of Cleft Extensions of Rings and Abelian Categories*”. Journal of Pure and Applied Algebra **150** (2000), 237–299.
- [8] A. BELIGIANNIS: “*The Homological Theory of Contravariantly Finite Subcategories: Gorenstein Categories, Auslander-Buchweitz Contexts and (Co)Stabilization*”. Communications in Algebra **28** (2000), 4547–4596.
- [9] A. BELIGIANNIS: “*On the Freyd Categories of an Additive Category*”. Homology Homotopy and Applications **2** (No.11) (2000), 147–185.
- [10] A. BELIGIANNIS: “*Homotopy Theory of Modules and Gorenstein Rings*”. Mathematica Scandinavica **89** (2001), 5–45.
- [11] A. BELIGIANNIS: “*Stable Equivalences and Stable Grothendieck Groups*”. Communications in Algebra, **30**(No. 1) (2002), 205–237.
- [12] A. BELIGIANNIS: “*Purity and Almost Split Morphisms in Abstract Homotopy Categories: A Unified Approach via Brown Representability*”. Algebras and Representation Theory, **5** (2002), 483–525.
- [13] A. BELIGIANNIS AND H. KRAUSE: “*Realizing Maps Between Modules over Tate Cohomology Rings*”. Contributions to Algebra and Geometry, **44**, No. 2 (2003), pp. 451–466.
- [14] A. BELIGIANNIS: “*Auslander-Reiten Triangles, Ziegler Spectra and Gorenstein Rings*”. K-Theory, **32** (2004), 1–82.
- [15] A. BELIGIANNIS: “*Cohen-Macaulay Modules, (Co)Torsion Pairs and Virtually Gorenstein Algebras*”. Journal of Algebra, Vol. **288**, No.1, (2005), 137–211.
- [16] A. BELIGIANNIS AND I. REITEN: “*Homological and Homotopical Aspects of Torsion Theories*”. Memoirs of the American Mathematical Society, Vol. 188 (2007), 207 pp.
- [17] A. BELIGIANNIS AND H. KRAUSE: “*Thick Subcategories and Virtually Gorenstein Algebras*”. Illinois Journal of Mathematics, **52** (2008), no. 2, 551–562.
- [18] A. BELIGIANNIS: “*On Algebras of Finite Cohen-Macaulay Type*”, Advances in Mathematics, Vol. 226, No.2, (2011), pp. 1973–2019.
- [19] A. BELIGIANNIS: “*Rigid Objects, Triangulated Subfactors and Abelian Localizations*”, Mathematische Zeitschrift, Vol. **274**, No. 3–4, (2013), pp. 841–883.
- [20] A. BELIGIANNIS: “*Relative Homology, Higher Cluster Tilting Theory and Categorified Auslander-Iyama Correspondence*”, Journal of Algebra, Vol. **444**, No. 3, (2015), 367–503.

4.2. Various Publications - Reports.

- [21] A. BELIGIANNIS: “*Cohen-Macaulay Modules and Virtually Gorenstein Algebras*”. Oberwolfach Reports, Volume **2**, Issue 1, (2005), 340–342.

- [22] A. BELIGIANNIS: “*A Note on Virtually Gorenstein Algebras*”. Oberwolfach Reports, Volume 3, Issue 1, (2006), 469–471.
- [23] A. BELIGIANNIS: “*Relative Homology and Higher Cluster Tilting Theory*”. Oberwolfach Reports, Volume 8, Issue 1, (2011), 534–537.

4.3. Preprints - Papers in Progress.

- [24] A. BELIGIANNIS: “*Representations of Exact Categories*”, Preprint in preparation, University of Ioannina, (2012), 23 pages.
- [25] A. BELIGIANNIS: “*Tilting Theory in Abelian Categories and Related Homotopical Structures*”, Preprint in preparation, University of Ioannina, (2012), 170 pages.
- [26] A. BELIGIANNIS: “*Relative Homology, Tilting Objects and Freyd’s Generating Hypothesis*”. Preprint in preparation.
- [27] A. BELIGIANNIS: “*Variations on a theme of Auslander-Tachikawa*”, Preprint in preparation, University of Ioannina, (2011), 52 pages.

5. GOOGLE SCHOLAR PROFILE

<https://scholar.google.gr/citations?hl=en&user=AgZNxXoAAAAJ>

6. GRANTS

- 1991–1995: Supported by a Grant from the National Grant Foundation of Greece.

7. COURSES AND LECTURE NOTES

- Linear Algebra I.
Lecture Notes: <http://users.uoi.gr/abeligia/LinearAlgebraI/LAI.html>
or <http://users.uoi.gr/abeligia/LinearAlgebraI/LAI2017/LAI2017.html>
- Linear Algebra II.
Lecture Notes: <http://users.uoi.gr/abeligia/LinearAlgebraII/LAII.html>
or <http://users.uoi.gr/abeligia/LinearAlgebraII/LAII2018/LAII2018.html>
- Number Theory.
Lecture Notes: <http://users.uoi.gr/abeligia/NumberTheory/NT2016/NT2016.html>
- Algebraic Structures I.
Lecture Notes: <http://users.uoi.gr/abeligia/AlgebraicStructuresI/ASI2017/ASI2017.html>
- Differential Geometry.
- Linear Programming.
- Rings, Modules and Applications.
- Ring Theory.
- Special Topics in Algebra.
- Algebra I, Algebra II, Applied Algebra (graduate courses).

8. E-BOOKS

- *An Introduction to Basic Algebra* (In Greek), Association of Hellenic Academic Libraries, Athens (2016), 544 pages, ISBN: 978-960-603-262-2.
<http://users.uoi.gr/abeligia/AlgebraicStructuresI/ASI2016/AlgebraBook.pdf>
- *Basic Algebra: Exercises and Problems* (In Greek), Association of Hellenic Academic Libraries, Athens (2016), 476 pages, ISBN: 978-960-603-259-2.
<http://users.uoi.gr/abeligia/AlgebraicStructuresI/ASI2016/AlgebraBookSol.pdf>

9. STUDENTS

- (A) Master Students: 10 Master students.
 Current MSc Students: 2.
- (B) PhD Students: 1 PhD Student.
 Current PhD Students: 2.

10. RESEARCH VISITS

Frequent research visits to the following Universities (2000-2010):

- Norwegian University of Science and Technology (NTNU), Trondheim, Norway.
- University of Paderborn, Paderborn, Germany.
- University of Bielefeld, Bielefeld, Germany.

11. PARTICIPATION IN MEETINGS

I have participated and lectured (sometimes as an invited speaker) in various Conferences and Seminars, in the following Universities and Institutions:

- University of Sherbrooke, Sherbrooke, Canada.
- Instituto de Matemáticas, UNAM, Mexico.
- NTNU, Trondheim, and Oslo Academy of Science and Letters, Norway.
- University of Bielefeld, and University of Paderborn, Germany.
- Normal Beijing University, China.
- Università dell' Insubria, Varese, Italy.
- Luminy, France.
- ICTP, Trieste, Italy.
- Oberwolfach, Germany.
- IPM, Tehran, Iran.
- Various Universities in Greece.

12. RECENT LECTURES (SELECTION)

- *Relative Homology and Higher Cluster Tilting Theory*, “Representation Theory of Quivers and Finite Dimensional Algebras”, Oberwolfach, Germany, February 2011.
- *Relative Homology and (Strong) Cluster Tilting Subcategories*, “Cluster Algebras and Quiver Representations”, Tehran, Iran, July 2010.
- *Tilting Theory and Quasi-abelian Categories*, “Representation Theory of Algebras”, Tehran, Iran, June 2008.
- *Ideals, ghost maps, and dimensions of triangulated categories*, “The Representation Dimension of Artin Algebras”, Bielefeld, Germany, May 2008.
- *Thick Subcategories and Virtually Gorenstein Algebras*, “Thick Subcategories - Classifications and Applications”, Oberwolfach, Germany, February 2006.
- *Tilting Theory in Abelian Categories*, “Representation Theory of Algebras”, ICTP, Trieste, Italy, January 2006.
- *Stable Categories, Cotorsion Pairs and Virtually Gorenstein Algebras*, “New Trends in Infinite-Dimensional Tilting Theory”, Varese, Italy, April 2005.
- *Cohen-Macaulay Modules and Virtually Gorenstein Algebras*, “Representation Theory of Algebras”, Oberwolfach, Germany, 6-12 February 2005.
- *Auslander-Reiten Triangles and the Ziegler Spectrum*, “Conference for Idun”, Trondheim, Norway, 1-2 March 2002.
- *Homologically Finite Subcategories, Torsion Theories and Closed Model Structures*, “Homological, Combinatorial and Geometric Aspects of Representation Theory”, Oslo, Norway, 21-24 September 2001.
- *Torsion Theories in Pretriangulated Categories*, NTNU, Trondheim, Norway, March 2001.
- *Auslander-Reiten Triangles*, NTNU, Trondheim, Norway, November 2000.

- *Purity and Almost Split Morphisms*, “International Conference on Representations of Algebras: ICRA 9”, Beijing, China, 21 August - 1 September 2000.
- *Homological Algebra in Triangulated Categories*, “Euroconference: Homological Invariants”, University of Ioannina, 16-21 March 1999.
- *Gorenstein Categories*, “International Conference on Representations of Algebras: ICRA 8 $\frac{1}{2}$ ”, Bielefeld, Germany, 31 August - 5 September 1998.

13. PROFESSIONAL SERVICE

1. Reviewer for: Math. Reviews (2000 -).
2. Editor (Coordinator for the subjects: *Algebra - Discrete Mathematics - Number Theory*) in: Bulletin of the Hellenic Mathematical Society.
3. Referee for various journals, including:
 1. Advances of Mathematics
 2. Compositio Mathematicum
 3. Journal of Algebra
 4. Journal of Pure and Applied Algebra
 5. Communications in Algebra
 6. Journal of Algebra and Its Applications
 7. Tohoku Mathematical Journal.
 8. Algebras and Representation Theory
 9. Applied Categorical Structures
 10. Colloquium Math.
 11. Contemporary Mathematics (AMS)
 12. Central European Journal of Mathematics
 13. Tbilisi Math. Journal
 14. Contributions to Algebra and Geometry
 15. Homology, Homotopy and its Applications
 16. Theory and Applications of Categories
 17. Science China: Mathematics
 18. Acta Mathematica Sinica.
 19. Soochow Journal Math.
 20. Czechoslovak Mathematical Journal.
 21. Journal of Mathematical Research with Applications
 22. Open Mathematics (De Gruyter)
 23. Journal of Homotopy and Related Structures.
 24. Bulletin of the Iranian Mathematical Society.
 25. Bulletin of the Hellenic Mathematical Society.
 26. Hacettepe Journal of Mathematics and Statistics.
 27. Open Mathematics.
 28. Journal für die reine und angewandte Mathematik (Crelle’s Journal).
 29. Transactions of AMS
 30. Proceedings of AMS
 31. Journals of L.M.S (Bulletin, Proceedings, Journal)
 32. Nagoya Math. Journal
 33. Kyoto Journal of Mathematics
 34. K-Theory
 35. Journal of K-Theory
 36. Journal of Topology
 37. Mathematische Zeitschrift
 38. Mathematische Nachrichten
 39. Glasgow Mathematical Journal
 40. Quarterly Journal of Mathematics
 41. Expositiones Math.
 42. Arkiv för Matematik.
 43. Journal of Commutative Algebra.
 44. London Math. Soc. Lecture Note Ser.
 45. Fields Inst. Commun., 45, Amer. Math. Soc.
 46. Mediterranean Journal of Mathematics
 47. Carpathian Journal of Mathematics.
 48. Taiwanese Journal of Mathematics
 49. Turkish Journal of Mathematics
 50. Bulletin of the Malaysian Mathematical Sciences Journal