

SHORT CURRICULUM VITAE

HARA CHARALAMBOUS

PERSONAL DATA

Last Name : Charalambous
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FIELD OF RESEARCH

Commutative Algebra with an emphasis on free resolutions of finitely generated modules over Noetherian local rings, Homological algebra and Topological connections.

PROFESSIONAL EXPERIENCE

2011-present Professor, Aristotle University of Thessaloniki, Greece
2004-2011 Associate Professor, Aristotle University of Thessaloniki, Greece
1996-2004 Associate Professor with tenure, University at Albany, State University of New York,
York,
1997-1998 Visiting Scholar, Columbia University,
1993-1994 Visiting Scholar, Brandeis University,
1990-1996 Assistant Professor, University at Albany, State University of New York,
1987-1990 Research Assistant at University of Illinois, Urbana-Champaign,
1983 Computer Analyst, Summer School, CERN, Switzerland.

EDUCATION

1990 Ph.D. diploma from University of Illinois at Urbana-Champaign. Ph.D. thesis title: " On Lower Bounds for the Betti Numbers of Finite Length Modules ". Thesis Advisor: E.G. Evans, Prof.
1986 M.S., Eastern Illinois University.
1984 Diploma, Mathematics, Aristotle University of Greece. GPA: 8.92, "Excellent".
1980 Matriculates at the School of Mathematics, AUTH. Accepted through national examination. Ranked first out of approximately 150 students.

HONORS AND AWARDS

- 2012** Grant “Aristia”, Research Committee, AUTH
2004-2007 Research Grant, “Pythagoras”, Greek Ministry of Education
2002 College Travel Funds Award, University at Albany
2001 NSF review panel, Commutative Algebra and Algebraic Geometry, Washington, DC
1996-1997 Faculty Research Awards Program, University at Albany,
1994-1995 Faculty Research Awards Program, University at Albany
1993-1994 NSF Research Planning Grant,
1993-1994 Drescher Affirmative Action Leave Award
1991 UUP New Faculty Award, State University of New York, Albany
1990 Reiner Algebra Award, University of Illinois, for Best Algebra Thesis,,
1986 Phi Kappa Phi, University of Illinois, for excellence in graduate studies
1980-1984 Awards from the Hellenic National Scholarship Foundation (IKY) for excellent performance in studies
1980 Award from IKY for grade achieved in the national examinations

SELECTED PUBLICATIONS

1. Chatzopoulos Stavros, Kolyva-Machera Fotini, Charalambous Hara, **A meta-analysis on the gender factor and the Academic Performance of students of the faculty of sciences of Aristotle University of Thessaloniki**, submitted 12 pg (2016).
2. Charalambous Hara, Thoma Apostolos, Vladioiu Marius; **Binomial fibers and indispensable binomials**, *J. Symbolic Computation*, 74, 578-591 (2016).
3. Charalambous Hara, Thoma Apostolos, Vladioiu Marius; **Markov bases of lattice ideals**, arXiv:1304.425, submitted (2015).
4. Charalambous, Hara; Thoma Apostolos, Vladioiu Marius; **Markov bases and generalized Lawrence liftings**, *Annals of Combinatorics*, 19 (4), 661-669 (2015).
5. Charalambous Hara, Tchernev Alexandre, **Betti numbers of multigraded modules of generic type**, *Journal of Pure and Applied Algebra*, 219 (5), 1868-1884 (2015).
6. Charalambous Hara; Thoma Apostolos, Vladioiu Marius; **Markov complexity of monomial curves**, *J. Algebra*, 417, 391-411 (2014).
7. Charalambous, Hara, **Topological Constructions for Multigraded Squarefree Modules**, *Proc. Amer. Math. Soc.* No 139, 2383-2397 (2011).
8. Charalambous Hara; Thoma Apostolos, **On the generalized Scarf complex of lattice ideals**, *J. Algebra* 323, No. 5, 1197-1211 (2010).
9. Charalambous Hara, Thoma Apostolos , **On simple A-multigraded minimal resolutions**, Combinatorial aspects of commutative algebra. Exploratory workshop on combinatorial commutative algebra and computer algebra, Mangalia, Romania, May 29--31, 2008, *Providence, RI , Amer. Math. Soc., Contemp. Math.*, 502 (2009), 33-44
10. Charalambous Hara, Katsabekis Anargyros, Thoma Apostolos, **Minimal systems of binomial generators and the indispensable complex of a toric ideal**, *Proc. Amer. Math. Soc.* 135 (2007), no. 11, 3443--3451
11. Charalambous Hara, **On the denominator of the Poincaré series for monomial quotient rings**. *Comm. Algebra* 33 (2005), no. 4, 1119-1125.
12. Charalambous Hara, Tchernev Alexandre, **Free resolutions for multigraded modules: a generalization of Taylor's construction**, *Math. Res. Lett.* 10 (2003), no. 4, 535--550.
13. Charalambous Hara, Deno Christa, **Multigraded modules**, *New York J. Math.* 7 (2001), 1-6.
14. Bayer Dave, Charalambous Hara, Popescu Sorin, **Extremal Betti numbers and applications to monomial ideals**, *J. Algebra* 221 (1999), no. 2, 497--512.

15. Charalambous Hara, **Pointed simplicial complexes**, *Illinois J. Math.* 41 (1997), no. 1, 1-9.
16. Charalambous Hara, **A resolution of the residue field over arbitrary monomial rings**, *J. Algebra* 181 (1996), no. 1, 187--195.
17. Charalambous Hara, Reeves Alyson, **Resolutions of monomial almost complete intersections and generalizations**, *Comm. Algebra* 23 (1995), no. 11, 4087--4099.
18. Charalambous Hara, Evans E. Graham Jr., **Resolutions obtained by iterated mapping cones**, *J. Algebra* 176 (1995), no. 3, 750--754.
19. Charalambous Hara, Reeves Alyson, **Poincaré series and resolutions of the residue field over monomial rings**, *Comm. Algebra* 23 (1995), no. 6, 2389--2399.
20. Charalambous Hara, Evans E. Graham, Jr., **Resolutions with a given Hilbert function**, *Commutative algebra: syzygies, multiplicities, and birational algebra (South Hadley, MA, 1992)*, Providence RI, Amer. Math. Soc., *Contemp. Math.* 159, (1994) 19-26,
21. Charalambous Hara, **Betti numbers and simplicial complexes**, *Comm. Algebra* 21 (1993), no. 12, 4467-4471.
22. Charalambous Hara, Evans E. Graham Jr., **Problems on Betti numbers of finite length modules**, *Free resolutions in commutative algebra and algebraic geometry (Sundance, UT, 1990)*, 25-33, Res. Notes Math., 2, Jones and Bartlett, Boston, MA, 1992.
23. Charalambous Hara, Evans E. Graham Jr, **A deformation theory approach to Betti numbers of finite length modules**, *J. Algebra* 143 (1991), no. 1, 246-251.
24. Charalambous Hara, **Betti numbers of multigraded modules**, *J. Algebra* 137 (1991), no. 2, 491-500.
25. Charalambous Hara, Evans E. Graham, Miller Matthew, **Betti numbers for modules of finite length**, *Proc. Amer. Math. Soc.* 109 (1990), no. 1, 63-70.
26. Charalambous Hara, **On Lower Bounds for the Betti Numbers of Finite Length Modules**, Ph.D. thesis, University of Illinois at Urbana-Champaign, 1990

MONOGRAPHS (GREEK)

1. [An Introduction to Commutative Algebra](#): H. Charalambous, 2016
2. [Galois Theory](#): H. Charalambous, T. Theohari, Kallipos, ISBN 978-960-603-208-0, 2015
3. [An Introduction to Linear Algebra for Natural Sciences](#): H. Charalambous, A. Fotiadis, Kallipos, ISBN 978-960-603-273-8, 2015
4. **An Introduction to Linear Algebra**: H. Charalambous, T. Theohari, H. Vavatsoulas, ISBN 960-631-094-9, 2006

Ph.D students

- M. Sutherland, PhD: 1998: “Hypersurfaces and Almost Complete Intersections, Resolutions and Poincaré Series of Cyclic Modules”, (current employment Associate Professor, State University of New York, Geneseo, NY).
- C. Deno, PhD: 1999: “ Resolving Multigraded Modules over Polynomial Rings”, (current employment: adjunct faculty, State University of New York, Albany, NY)

Currently supervising 2 Ph.D. students, starting dates 2013 and 2014.

INTERNATIONAL CONFERENCES (ORGANIZER)

1. **2009: History of Modern Algebra: 19th century and later**, AUTH, Thessaloniki
<http://hmalgebra.web.auth.gr/>
2. **2007: Workshop on Combinatorics and Commutative Algebra II**, AUTH, Thessaloniki, <http://web.auth.gr/commcomb/>
3. **2006: Workshop on Combinatorics and Commutative Algebra I** Ioannina, <http://web.auth.gr/commcomb/>
4. **2001: Annual Route 81 Conference on Algebraic Geometry and Commutative Algebra**, University at Albany, SUNY
5. **1986: Annual Route 81 Conference on Algebraic Geometry and Commutative Algebra**, University at Albany, SUNY

SEMINAR ALGEBRA NUMBER THEORY AND MATHEMATICAL LOGIC

- Coorganizer: 2005-on <http://users.auth.gr/~hara/alntlo/>

PROCEEDINGS (EDITOR)

- Proceedings of the **History of Modern Algebra conference: 19th century and later**, AUTH, Thessaloniki, 2010, Editors Th. Theohari-Apostolidi, H. Charalambous, D. Papadopoulou,
- Proceedings of the 6th Panhellenic Conference in Algebra and Number Theory, 2006, Editors, H. Charalambous, Th. Theohari-Apostolidi, ISBN 960-234-628-8

JOURNAL: EDITOR

- Bulletin of the Hellenic Mathematical Society

TEACHING EXPERIENCE

- Commutative Algebra
- Homological Algebra
- Basic Algebra
- Galois Theory
- Algebraic Structures
- Linear Algebra I, II
- History of Mathematics
- Number Theory
- Introduction to Algebra
- Introduction to Theory of Curves
- Calculus I, II, III
- Linear Algebra for Computer Scientists

SELECTED INVITED TALKS AND COLLOQUIA

- Main Speaker, National Algebra School, Mangalia 2012, 2014
- Rt 81 Conference, Commutative Algebra and Algebraic Geometry, Syracuse, 2013
- Special Session on Combinatorial Commutative Algebra, AMS meeting, Temple University, Philadelphia, 2013
- Algebra Seminar, Department of Mathematics, University at Genova, 2013
- Seminar of the Department of Mathematics and Statistics, University of Cuprys, 2013
- Contemporary Algebra and Geometry in Greece, 2012
- Algebra Seminar, University Crete, 2011
- Colloquium, University at Albany, SUNY, 2006, 2010
- Colloquium, Ovidius University, Constanza 2009
- Algebra Seminar, Ioannina 2009
- Algebre commutative et ses interactions avec la geometrie algebrique, , CIRM, Luminy, France, 2008
- Exploratory Workshop on Combinatorial Commutative Algebra and Computer Algebra, Mangalia, Romania, 08

SERVICE TO THE PROFESSION (selection)

- Reviewer για το Zentralblatt MATH
- Referee for the
 - Journal of Pure and Applied Algebra,
 - Commentarii Mathematici Helvetici
 - Journal of Algebra,
 - Illinois Journal of Mathematics
 - Communications in Algebra,
 - Proceedings of the American Mathematical Society,
 - Bulletin Mathematique de la Societe des Sciences Mathematiques de Roumanie,
 - Special Issue of the Journal of Symbolic Computation
 - Compositio Mathematica,
 - European Journal of Combinatorics,
 - International Journal of Algebra and Computation,
 - Pacific Journal of Mathematics,
 - Australian Journal of Combinatorics
- Reviewer for NSERC (Natural Sciences and Engineering Research Council of Canada), 2004
- Reviewer for NSA/AMS (National Security Agency/American Mathematical Society),), 2004
- Member of the NSF committee, Commutative Algebra and Algebraic Geometry, 2000
- NSF reviewer 2001, 2000, 1996, 1992 και 1991, 2003

SERVICE TO THE ARISTOTLE UNIVERSITY (selection)

- Head of the Department of Algebra, Number Theory and Mathematical Logic, AUTH, 2014-
- Director of the Graduate Studies Program, Department of Mathematics, 2013-2015,
- Coordinator, Committee for Gender Equality and Equity of the Faculty of Sciences of AUTH, 2015-
- University Senate 2010-2011

- Member of the Research Committee of AUTH 2010-2013
- Member of the Environment Committee of AUTH 2010-2012

SERVICE TO THE UNIVERSITY AT ALBANY, SUNY (selection)

- Member of the executive committee of the Senate
- Head of the Graduate Affairs Committee of the University Senate , 2002-2004
- Member of the Promotion Committee for the School of Arts and Sciences , 1999-2001