LIANA M. ŞEGA
CURRICULUM VITAE

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Education

Ph.D. in Mathematics, Purdue University	August 2002
advisor: Luchezar Avramov	
B.S. in Mathematics, University of Bucharest, Romania	June 1997

Research interests

Commutative Algebra, Homological Algebra

Employment

Research Member	Mathematical Sciences Research Institute	Spring 2013
Associate Professor (with tenure)	University of Missouri, Kansas City	2011-present
Assistant Professor	University of Missouri, Kansas City	2005-2011
Visiting Research Instructor	Michigan State University	2003-2005
Postdoctoral Fellow	Mathematical Sciences Research Institute	2002-2003
Liftoff Mathematician	Clay Mathematics Institute	Summer 2002
Graduate Teaching Assistant	Purdue University	1997-2002

Honors and funding

Collaborations grant for Mathematicians	Simons Foundation	Sept 2015-Aug 2020
DMS-1101131; Principal Investigator	NSF	Sept 2011-Aug 2014
Collaborations grant for Mathematicians	Simons Foundation	Jun 2011-Aug 2013
Travel grants	AWM-NSF	2004, 2007
Liftoff Mathematician	Clay Mathematics Institute	Summer 2002
Puskas Memorial Fellowship	Purdue University	2001-2002
Purdue Research Foundation Grant	Purdue University	1999-2001
Purdue Research Foundation Grant	Purdue University	Summer 1998
Merit Scholarship	University of Bucharest	1993-1997

Ph.D students

Melissa Menning (since May 2009)

Justin Hoffmeier – Ph.D August 2014;

Undergraduate research direction

Whitney Berard: *Graphs based on Vector Spaces over Finite Fields*; poster   May 2008
(project funded by UMKC's undergraduate research venue, SEARCH)

Publications

1. L. M. Şega, *Homological properties of powers of the maximal ideal of a local ring*, J. Algebra **241** (2001), 827-858.

2. L. M. Şega, *Vanishing of cohomology over Gorenstein rings of small codimension*, Proc. Amer. Math. Soc. **131** (2003), 2313-2323.

3. C. Huneke, L. M. Şega, A. N. Vraciu, *Vanishing of Ext and Tor over Cohen-Macaulay local rings*, Illinois J. Math. **48** (2004), 295-317.

4. D. A. Jorgensen, L. M. Şega, *Nonvanishing cohomology and classes of Gorenstein rings*, Adv. Math. **188** (2004), 470–490.

5. L. L. Avramov, R.-O. Buchweitz, L. M. Şega, *Extensions of a dualizing complex by its ring: commutative versions of a conjecture of Tachikawa*, J. Pure Appl. Algebra **201** (2005), 218-239.

6. C. Rotthaus, L. M. Şega, *Some properties of graded local cohomology modules*, J. Algebra **283** (2005), 232–247.

7. D. A. Jorgensen, L. M. Şega, *Asymmetric complete resolutions and vanishing of Ext over Gorenstein rings*, Int. Math. Res. Notices **56** (2005), 3459–3477.

8. C. Rotthaus, L. M. Şega, *Open loci of graded modules*, Trans. Amer. Math. Soc. **358** (2006), 4959-4980.

9. D. A. Jorgensen, L. M. Şega, *Independence of the total reflexivity conditions for modules*, Algebr. Represent. Theory **9** (2006), 217–226.

10. C. Rotthaus, L. M. Şega, *On a class of coherent regular rings*, Proc. Amer. Math. Soc. **135** (2007), 1631–1640.

11. L. L. Avramov, S. Iyengar, L. M. Şega, *Free resolutions over short local rings*, J. London Math. Soc. **78** (2008), 459-476.

12. M. T. Hughes, D. A. Jorgensen, L. M. Şega, *Acyclic complexes of finitely generated free modules over local rings*, Math. Scand. **105** (2009), 85–98.

13. L. L. Avramov, S. Iyengar, L. M. Şega, *Short Koszul modules*, J. Commut. Algebra, **2** (2010), 249–279.

14. L. M. Şega, *Self-tests for freeness over commutative artinian rings*, J. Pure Appl. Algebra **215** (2011), 1263-1269.

15. I. B. Henriques, L. M. Şega, *Free resolutions over short Gorenstein local rings*, Math. Z. **267** (2011), 645–663.

16. L. L. Avramov, I. B. Henriques, L. M. Şega, *Quasi-complete intersection homomorphisms*, Pure and Applied Math. Quarterly **9**, no 4 (2013), 1–31.

17. L. M. Şega, *On the linearity defect of the residue field*, J. Algebra **384** (2013), 276–290.

18. M. E. Rossi, L. M. Şega, *Poincaré series of compressed Gorenstein local rings*, Adv. Math **259** (2014), 421–447.

19. A. Kustin, L. M. Şega, A. Vraciu, *Minimal quasi-complete intersection ideals*, Illinois J. Math, accepted.

20. J. Hoffmeier, L. M. Şega, *Generalized Koszul properties of commutative local rings*, submitted; 19 pages.

Preprints are available at `http://s.web.umkc.edu/segal/papers.html`

Invited talks in the past 6 years

MSRI colloquium, Berkeley	Mar. 2013
AMS Meeting, Louisville, KY, special session	Oct 2013
Joint International AMS-RMS meeting, Alba Iulia, Romania, special session	June 2013
Commutative Algebra and Its Interactions with Algebraic Geometry,	May 2012
Representation Theory, and Physics, Guanajuato, Mexico	
Interactions between Commutative Algebra and Representation Theory conference	Apr. 2012
Syracuse University, NY	
AMS Meeting, Lincoln, NE, special session	Oct 2011
AMS Meeting, Georgia Southern University, special session	Mar 2011
AMS Meeting, Berkeley, CA, special session	June 2010
Commutative Algebra Seminar,University of Nebraska, Lincoln	April 2010
AMS meeting, Lexington, special session	Mar. 2010
AMS Meeting, Waco, TX, special session	Oct. 2009
AMS Meeting, Georgia State University-University of South Carolina	Apr. 2008
Algebra Seminar, Syracuse University, Syracuse	Mar. 2008
Commutative Algebra Seminar, University of Kansas, Lawrence	Oct. 2007
Commutative Algebra Conference, Atlanta, GA	Mar 2007
Conference on Homological and Combinatorial Aspects in Commutative	Aug. 2007
Algebra, Busteni, Romania	

Professional activities

co-organizer: Mathematical Research Communities - workshop in Commutative Algebra,
   June 7-June 13, 2015, Snowbird, Utah
      This is an NSF funded program aimed to engage in research early career mathematicians.
co-organizer: special session in Commutative algebra,
   Sectional AMS meeting in Saint Louis, October 2013
organizer: mini-session of the workshop "*Representation Theory, Homological Algebra, and Free Resolutions*"
   MSRI, Berkeley, February 2013
Member of the local organizing committee of the conference *Commutative Algebra: Connections*
   with Algebraic Topology and representation Theory, Lincoln, NE, May 2008
NSF Panel Review member (one time)
Referee for the following journals:
   Comm. Algebra, Illinois J. Math, Homology Homotopy Appl., Proc. Amer. Math. Soc.,
   Internat. J. of Commutative Rings, J. Pure and Applied Algebra, J. Algebra, Trans. Amer.
   Math. Soc., J. Commut. Algebra , Math. Res. Letters, Adv. Math., Questiones Mathematicae,
   Rocky Mountain J. Math., MSRI publications.
Proposal reviewer for the National Science Foundation, the National Security Agency and
   the Missouri Research Board.
Reviewer for Mathematical Reviews (MR)
Departmental representative for SEARCH, an undergraduate research program at UMKC
Organizer of the Graduate Student Algebra Seminar, Purdue University, 2000-2001
Women in Science Program, Purdue University, 1997-1998.
Member of the American Mathematical Society

Workshops/programs attended
(with support from the organizers and/or NSF)

Worshops in the *Commutative Algebra* program, MSRI Berkeley	2012-2013
Commutative Algebra and Its Interactions with Algebraic Geometry	May 2012
Representation Theory, and Physics workshop, Guanajuato, Mexico	
Keep the Research Alive (funded by an MCPT grant), University of Lincoln, NE	May 2008
Critical Issues in Education: Teaching Teachers Mathematics, MSRI, Berkeley	May 2007
Kommutative Algebra, Oberwolfach, Germany	Apr. 2005
Commutative Algebra: Homological and Birational Theory,	Sep. 2004
Banf International Research Center, Canada	
Interactions between Homotopy Theory and Algebra, University of Chicago	July 2004
Commutative Algebra: Presentations by Young Researchers, Snowbird, Utah	July 2003

Departmental committees/University service

Principal Graduate Advisor, since Aug. 2013

Calculus Coordinator, since July 2010.

Departmental catalog editor, since Dec. 2010

College of Arts and Sciences scholarship committee, March 2011 & March 2012

IPh.D. recruiting committee, since July 2008

Search committee, Oct 2007 - Apr 2008, Oct 2011-Apr 2012 (chair)

Undergraduate program committee, since July 2008.

GTA supervisory Committee (chair), July 2007–Aug 2012
(I organized teaching workshops, coordinate classroom visits, provide assistance to the GTAs)

Seminar Organizer/Library coordinator, July 2009-July 2010.

Faculty secretary, 2010-2011

Various recruitment activities

Teaching experience

Classes taught in the past 7 years:

Undergraduate:	MATH 210 and MATH 220: Calculus I & II;
	MATH 214: Algebra for Teachers;
	MATH 300 and MATH 420: Linear Algebra I & II;
	MATH 301: Sets and Proof;
	MATH 410: Modern Algebra;
	MATH 407: Complex Analysis;
	MATH 402: Real Analysis;
Graduate:	MATH 5509 and MATH 5519: General Algebra I & II;
	MATH 5510: Complex Analysis;
	MATH 5590: Homological Algebra (independent study)
	MATH 5590: Algebraic Geometry (independent study)
	MATH 5590: Invariant Theory (independent study)