
Employment

- 2007–today **Associate Professor** at *Syracuse University*.
2004–2007 **Assistant Professor** at *Syracuse University*.
2003–2004 **Post-doctoral Fellow** at *University of Toronto*.
2000–2003 **Assistant Professor** at *University of Kansas*.
1995–2000 **Graduate Teaching Assistant** at *University of Nebraska–Lincoln*.

Education

- 2000 **Ph.D.** *University of Nebraska–Lincoln*, Lincoln NE.
Advisor: Roger Wiegand
Dissertation: *Finite Cohen–Macaulay Type*
1997 **M.A.** *University of Nebraska–Lincoln*, Lincoln NE.
1995 **B.A.** *Reed College*, Portland OR.

Grants and Funding

- 2010 **AMS Travel Grant** to attend ICM in Hyderabad, India.
2009–2012 **National Science Foundation Grant DMS-0902119**, “Topics in the Representation Theory of Local Rings”.
2006–2009 **National Science Foundation Grant DMS-0556181**, “Topics in the Representation Theory of Local Rings”.
2006 **AMS Travel Grant** to attend ICM in Madrid, Spain.
2004–2006 **National Security Agency Young Investigator Grant**.
2003 **MSRI General Member** associated with year-long program in *Commutative Algebra*.
2000–2003 **NSF Mathematical Sciences Research Postdoctoral Fellowship** taken at the *University of Kansas*.
2000 **Clay Liftoff Mathematician** sponsored for summer research by *Clay Mathematics Institute*.

Research Interests

- Commutative Algebra
- Representation Theory
- Non-commutative Algebraic Geometry
- Algebraic Geometry

Publications

Articles

- [1] GJL and Roger Wiegand. Ascent of finite Cohen-Macaulay type. *J. Algebra*, 228(2):674–681, 2000. doi:10.1006/jabr.2000.8294.
- [2] GJL. Mixed characteristic hypersurfaces of finite Cohen-Macaulay type. *J. Pure Appl. Algebra*, 167(2-3):225–257, 2002. doi:10.1016/S0022-4049(01)00044-5.
- [3] GJL. Gorenstein modules, finite index, and finite Cohen-Macaulay type. *Comm. Algebra*, 30(4):2023–2035, 2002. doi:10.1081/AGB-120013229.

- [4] Craig Huneke and GJL. Two theorems about maximal Cohen-Macaulay modules. *Math. Ann.*, 324(2):391–404, 2002. doi:10.1007/s00208-002-0343-3.
- [5] Craig Huneke and GJL. Local rings of countable Cohen-Macaulay type. *Proc. Amer. Math. Soc.*, 131(10):3003–3007 (electronic), 2003. doi:10.1090/S0002-9939-03-07167-3.
- [6] Ian M. Aberbach and GJL. The F -signature and strong F -regularity. *Math. Res. Lett.*, 10(1):51–56, 2003.
- [7] Craig Huneke and GJL. On a conjecture of Auslander and Reiten. *J. Algebra*, 275(2):781–790, 2004. doi:10.1016/j.jalgebra.2003.07.018.
- [8] GJL and Roger Wiegand. Hypersurfaces of bounded Cohen-Macaulay type. *J. Pure Appl. Algebra*, 201(1-3):204–217, 2005. doi:10.1016/j.jpaa.2004.12.028.
- [9] GJL and Roger Wiegand. Local rings of bounded Cohen-Macaulay type. *Algebr. Represent. Theory*, 8(2):225–238, 2005. doi:10.1007/s10468-004-8319-5.
- [10] GJL. Appendix to “Tight closure theory and characteristic p methods”, by M. Hochster. In *Trends in commutative algebra*, volume 51 of *Math. Sci. Res. Inst. Publ.*, pages 181–210. Cambridge Univ. Press, Cambridge, 2004.
- [11] GJL. Endomorphism rings of finite global dimension. *Canad. J. Math.*, 59(2):332–342, 2007. doi:10.4153/CJM-2007-014-1.
- [12] David A. Jorgensen and GJL. On the growth of the Betti sequence of the canonical module. *Math. Z.*, 256(3):647–659, 2007. doi:10.1007/s00209-006-0096-x.
- [13] Ragnar-Olaf Buchweitz and GJL. Factoring the adjoint and maximal Cohen-Macaulay modules over the generic determinant. *Amer. J. Math.*, 129(4):943–981, 2007. doi:10.1353/ajm.2007.0022.
- [14] Ragnar-Olaf Buchweitz, GJL, and Michel Van den Bergh. Non-commutative desingularization of determinantal varieties I. *Invent. Math.*, 182(1):47–115, 2010. doi:10.1007/s00222-010-0258-7.
- [15] Andrew Crabbe and GJL. Wild hypersurfaces. *J. Pure Appl. Algebra*, 215(12):2884–2891, 2011. doi:10.1016/j.jpaa.2011.04.009.
- [16] David A. Jorgensen, GJL, and Sean Sather-Wagstaff. Presentations of rings with non-trivial self-orthogonal modules. *Collectanea Mathematica*, 2012. doi:10.1007/s13348-010-0024-6.

Books

- [1] Srikanth B. Iyengar, GJL, Anton Leykin, Claudia Miller, Ezra Miller, Anurag K. Singh, and Uli Walther. *Twenty-four hours of local cohomology*, volume 87 of *Graduate Studies in Mathematics*. American Mathematical Society, Providence, RI, 2007.
- [2] GJL and Roger Wiegand. *Cohen-Macaulay Representations*. Amer. Math. Soc., 2012. A graduate textbook, in press. URL: <http://www.leuschke.org/Research/MCMBBook>.

Articles in progress or in press

- [1] GJL. Non-commutative crepant resolutions: scenes from categorical geometry. In S. Sather-Wagstaff et. al., editor, *Progress in Commutative Algebra: Ring Theory, Homology, and Decompositions*, De Gruyter Proceedings in Mathematics. Walter de Gruyter Inc., Boston MA, 2012. To appear.
- [2] Ragnar-Olaf Buchweitz, GJL, and Michel Van den Bergh. Non-commutative desingularization of determinantal varieties, II: Arbitrary minors. Submitted.
- [3] Ragnar-Olaf Buchweitz, GJL, and Michel Van den Bergh. Non-commutative desingularization of determinantal varieties, III: The Young quiver of the desingularization. In preparation.
- [4] Ryan Kinser, GJL, Steven V Sam, and Gufang Zhao. Non-commutative desingularization of varieties of complexes. In preparation.

Selected Invited Lectures, Last 5 Years

- 2011 Dec. “Non-commutative desingularizations of determinantal varieties”, *Winter Meeting of the Canadian Mathematical Society*, Toronto, ON, Canada.
- Nov. “The MCM McKay Correspondence”, *Northeastern University Representation Theory Seminar*, Boston, MA.
- Nov. “Non-commutative crepant resolutions”, *Northeastern University Special Colloquium*, Boston, MA.
- Oct. “Wild Hypersurfaces”, *AMS Special Session*, Lincoln, NE.
- Mar. “Wild Hypersurfaces”, *Homological Methods Seminar*, University of Toronto.
- 2010 Nov. “Wild Hypersurfaces”, *AMS Special Session*, Notre Dame, IN.
- Feb. “Wild Hypersurfaces”, *Mathematics Department Algebra Seminar*, University of Kansas, Lawrence, KS.
- 2009 Oct. “Semidualizing modules and Gorenstein presentations”, *AMS Special Session*, Boca Raton, FL.
- Jun. “Non-commutative desingularization of determinantal varieties”, *CIMPA-UNESCO-IPM School on Commutative Algebra and Applications to Combinatorics and Algebraic Geometry*, Tehran, Iran (cancelled for political reasons).
- Mar. “Semidualizing modules and Gorenstein presentations”, *AMS Special Session*, Urbana, IL.
- 2008 Dec. “Semidualizing modules and Gorenstein presentations”, *CMS Special Session*, Ottawa, Ontario, Canada.
- Oct. “What should a non-commutative desingularization be?”, *Route 81 Conference #18*, Kingston, Ontario, Canada.
- Sep. “Non-commutative desingularization of determinantal varieties”, *Conference on interactions between representation theory and commutative algebra*, Barcelona, Spain.
- Sep. “What is a non-commutative desingularization?”, *Mathematics Department Colloquium*, University of Nebraska-Lincoln.
- Mar. “Non-commutative desingularizations of determinantal varieties”, *International Conference on Commutative Algebra*, Yokohama, Japan.
- 2007 Oct. “Non-commutative desingularization of the generic determinant”, *AMS Special Session*, Rutgers, NJ.
- Mar. “Factoring the adjoint and modules over the generic determinant”, *Mathematics Department Colloquium*, Georgia State University.
- Jan. “Non-commutative desingularization of the generic determinant”, *AMS Special Session*, New Orleans, LA.
- 2006 Nov. “Factoring the adjoint and modules over the generic determinant”, *Kent Regional Algebra Weekend*, Kent State University.
- Sep. “Non-commutative desingularization of the generic determinant”, *Joint meeting of the Canadian and Mexican Mathematical Societies*, Guanajuato Mexico.
- Aug. “Non-commutative desingularization of the generic determinant”, *Fields Institute Workshop on Computational and Combinatorial Commutative Algebra*, Toronto, Ontario, Canada.
- Apr. “Coxeter-Dynkin diagrams: A, D, and E”, *32nd Annual New York State Regional Graduate Mathematics Conference*, Syracuse University.

- Apr. “Non-commutative desingularization of the generic determinant”, *AMS Special Session*, San Francisco, CA.
- Feb. “Non-commutative desingularization of the generic determinant”, *Algebraic Geometry Seminar*, Queen’s University.

Teaching

- 2004–today **Syracuse University.**
 Elements of Modern Mathematics, Calculus I, II, and III, Differential Equations, Second Course in Linear Algebra, Applied Linear Algebra, Intro to Abstract Algebra, Senior Seminar in Mathematics, Graduate Algebra I, Graduate Algebra II, Homological Algebra, Topics in Algebra: Combinatorial Commutative Algebra, Topics in Algebra: MCM Modules
- 2003–2004 **University of Toronto.**
 Calculus!
- 2000–2003 **University of Kansas.**
 Calculus I, Intro to Statistics, Special Topics: MCM Modules
- 1995–2000 **University of Nebraska–Lincoln.**
 College Algebra, Trigonometry, Precalculus, Recitations for Calculus I and II

Service

Syracuse University Mathematics Department

- 2011–2012 **Ad Hoc Hiring Committee** to fill tenure-track position in Combinatorics.
- 2011–2012 **Ad Hoc Committee** for the tenure case of Lixin Shen.
- 2011–2012 **Executive Committee.**
- 2009–2012 **Colloquium Chair.**
- 2009–2011 **Graduate Committee** (*Chair 2010–2011*).
- 2006–2008 **Undergraduate Committee.**

PhD Preliminary Exam Administrator.

Jan 2007, Aug 2007, Jan 2009, Jan 2011, Jan 2012.

Specialty Exam Committees.

Adam McCaffrey, Thomas Bleier, Kosmas Diveris, Jeremy Entner

PhD Dissertation Defense Committees.

Markus Reitenbach, Sebastian Burciu, Philip Lynn, Allen Pelley, Christina Graves, Thomas Bleier, Marju Purin

Syracuse University College of Arts & Sciences

- 2010–2011 **Search Committee for Mathematics Department Chair** charged by Mathematics Department and Dean Langford to formulate and implement procedures to select new Chair.
- 2009–2010 **First-Year Advisor** help incoming first-year students from across the college.
- 2007–2008 **Curriculum Committee** supervise courses and curricular programs.

Mathematical Community

- 2001–today **co-Founder, Designer, and co-Webmaster** of *www.commalg.org*, with Moira McDermott and Sean Sather-Wagstaff. A website for the commutative algebra community, including conference announcements, news, and links of interest to commutative algebraists.

2007–today **Associate Editor** for *Journal of Commutative Algebra* (formerly *International Journal of Commutative Rings*).

Conferences Organized

- 2012 Apr. **A conference in honour of Ragnar-Olaf Buchweitz** with *S. Iyengar, C. Miller, and D. Zacharia*, Syracuse NY.
- 2010 Oct. **AMS Special Session on Commutative Algebra and Algebraic Geometry (proxy for $(N+4)^{th}$ Route 81 Conference)** with *A. Geramita, C. Miller, and M. Stillman*, Syracuse NY.
- 2010 Jan. **AMS Special Session on Commutative Algebra** with *S. Cooper and S. Sather-Wagstaff*, San Francisco CA.
- 2009 Oct. **$(N+3)^{th}$ Annual Route 81 Conference on Algebraic Geometry and Commutative Algebra** with *S. P. Diaz and C. Miller*, Syracuse NY.
- 2006 Dec. **CMS Special Session on Commutative Algebra and Algebraic Geometry** with *R.-O. Buchweitz and G. G. Smith*, Toronto, Ontario, Canada.
- 2006 Sep. **N^{th} Annual Route 81 Conference on Algebraic Geometry and Commutative Algebra** with *S. P. Diaz and C. Miller*, Syracuse NY.
- 2005 Aug. **Minnowbrook Workshop on Commutative Algebra** with *S. Iyengar, C. Miller, and A. Singh*, Minnowbrook Adirondack Conference Center, NY. Funded by Syracuse University and the National Security Agency.
- 2004 May **AMS Special Session on Commutative Algebra** with *S. Iyengar*, Houston TX.
- 2001 Oct. **AMS Special Session on Commutative Algebra** with *S. Loepp*, Williamsown MA.

Other

Referee for the following journals.

- Acta Mathematica Sinica
- Advances in Mathematics
- Algebra and Representation Theory
- American Journal of Mathematics
- Bulletin of the AMS
- Czechoslovak Mathematical Journal,
- Communications in Algebra
- Geometriae Dedicata
- Illinois Journal of Mathematics
- Inventiones Mathematicae
- Journal of Algebra
- Mathematica Scandinavica
- Mathematical Research Letters
- Mathematische Zeitschrift
- Nagoya Mathematical Journal
- Pacific Journal of Mathematics
- Proceedings of the AMS
- Rocky Mountain Journal of Mathematics
- Transformation Groups

Reviewer for NSF and NSA proposals.

Reviewer for *Mathematical Reviews*, 29 papers.