Born July 30, 1964 in Seattle, Washington

Citizenship: United States Married, two children

Education

| 1986 | A.B. | Mathematics | University of California, Berkeley | |
|------------------------------------|--------|-------------|------------------------------------|--|
| 1988 | M.S. | Mathematics | Yale University | |
| 1989 | M.Phil | Mathematics | Yale University | |
| 1990 | Ph.D. | Mathematics | Yale University | |
| Thesis Advisor: George B. Seligman | | | | |

Thesis: Projective Modules over Lie Algebras of Cartan Type

Employment

| 1990-91 | Visiting Assistant Professor | Auburn University |
|-----------|----------------------------------|-------------------------|
| | Visiting Assistant Professor | Northwestern University |
| 1992 – 95 | NSF Postdoctoral Fellow | Northwestern University |
| 1994–98 | Assistant Professor | Utah State University |
| 1998 – 02 | Associate Professor | Utah State University |
| 2001 – 03 | Associate Professor | University of Georgia |
| 2003 - 10 | Professor | University of Georgia |
| 2010- | Distinguished Research Professor | University of Georgia |

Research Interests

Representation Theory of Algebraic Groups, Quantum Groups, and Lie Superalgebras Homological Methods in Representation Theory Cohomology and Support Varieties for Algebraic and Finite Groups Algebraic and Geometric Methods in Lie Theory

Visiting Research Positions (with funding)

| April 1993 | University of Virginia |
|----------------|--|
| April 1995 | University of Virginia |
| July 1998 | Aarhus University, Denmark |
| June–July 2002 | Visiting Professor, Osaka City University, Japan |
| Jan-June 2003 | EPSRC Research Fellow, Oxford University, England |
| May 2004 | Institute for Mathematical Sciences, University of Virginia |
| June 2005 | Ecole Polytechnique Federale, Lausanne, Switzerland |
| Jan-June 2006 | Visiting Professor, University of Virginia |
| March 2008 | General Member, Mathematical Sciences Research Institute, Berkeley, CA |

July 2009 East China Normal University, Shanghai, China

July 2009 Peking University, Beijing, China

Jan-June 2010 Visiting Professor, University of Sydney, Australia March-June 2010 University of New South Wales, Sydney, Australia

April 2010 University of Melbourne, Australia July 2013 Morningside Institute, Beijing, China

May-June 2014 Centre de Recherches Mathematiques (CRM), Montreal, Canada

Feb-March 2015 Mittag-Leffler Institute, Stockholm, Sweden

Feb-March 2018 General Member, Mathematical Sciences Research Institute, Berkeley, CA

Individual Research Grants: Principal Investigator

- 1. National Science Foundation Grant DMS-9206284, Mathematical Sciences Postdoctoral Research Fellowship, 1992-95, \$75,000
- 2. National Science Foundation Grant DMS-9500715, Cohomology and Representation Theory of Algebraic Groups and Lie Algebras, 1995-98, \$59,050
- 3. Utah State University: Faculty Research Grant, Representation Theory of Algebraic Groups and Lie Algebras, 1996-97, \$12,088
- 4. National Science Foundation Grant DMS-9800960, Cohomology and Representation Theory: Algebraic Groups, Finite Groups and Lie Algebras, 1998-2001, \$72,900
- 5. National Science Foundation Grant DMS-0136082, Cohomology and Representation Theory: Reductive Algebraic Groups and Related Structures, 2001-04, \$100,995
- 6. National Science Foundation Grant DMS-0400548, Cohomology and Representation Theory, 2004-07, \$118,359
- 7. National Science Foundation Grant DMS-0654169, Cohomological Methods in the Representation Theory of Algebraic Groups, Quantum Groups and Superalgebras, 2007-10, \$159,744
- 8. National Science Foundation Grant DMS-1002135, Cohomology, Geometry and Representation Theory: Algebraic Groups, Quantum Groups and Lie Superalgebras, 2010-13, \$169,976
- 9. National Science Foundation Grant DMS-1402271, Representation Theory, Geometry and Cohomology in Tensor Triangulated Categories, 2014-17, \$158,301
- 10. National Science Foundation Grant DMS-1701768, Representations, Cohomology and Geometry in Tensor Triangulated Categories, 2017-20, \$165,001

Other Grants:

1. Co-Principal Investigator on National Science Foundation VIGRE Grant DMS-0089927, Vertical Integration of Research and Educational Activities in Mathematics at the University of Georgia, 2001-07, \$2,451,334

- 2. Principal Investigator on National Science Foundation VIGRE Grant DMS-0738586, Vertical Integration of Research and Education in Mathematics at the University of Georgia, 2008-15, \$3,819,865
- 3. Co-Principal Investigator on National Science Foundation Grant DMS-0852373, Southeastern Lie Theory Workshop Series, 2009-11, \$60,000
- 4. Co-Principal Investigator on National Science Foundation Grant DMS–1206255, Southeastern Lie Theory Workshop Series, 2012-14, \$38,750
- 5. Co-Principal Investigator on National Science Foundation Grant DMS-1544407, Southeastern Lie Theory Workshop Series, 2015-17, \$49,488
- 6. Co-Principal Investigator on National Science Foundation Grant DMS-1801804, Southeastern Lie Theory Workshop Series, 2018-19, \$49,970

Undergraduate and Graduate Academic Honors/Awards/Recognition

| 1986 | Percy Lionel Davis Award (departmental prize), University of California, Berkeley |
|-----------|---|
| 1986 | Graduated with Highest Honors in Mathematics, University of California. Berkeley |
| 1986- | Phi Beta Kappa, University of California, Berkeley |
| 1986 – 89 | Annual Departmental Stipend Prize, Yale University |
| 1986 – 90 | Teaching Fellowship, Yale University |
| 1987 – 90 | Research Assistantship, Yale University |
| | |

University Faculty Academic Honors/Awards/Recognition

| 1999-00 | Researcher of the Year, Department of Mathematics and Statistics, Utah St. University | | | |
|---------|---|--|--|--|
| 2007 | Creative Research Medal, University of Georgia | | | |
| 2008 | McCay Award (for distinguished research, teaching and service), Department of Math- | | | |
| | ematics, University of Georgia | | | |
| 2010 | Distinguished Research Professorship, University of Georgia | | | |
| 2016 | Lamar Dodd Creative Research Award, University of Georgia | | | |

National and International Academic Honors/Awards/Recognition

| 1992 - 95 | National Science Foundation Postdoctoral Fellowship |
|-----------|--|
| 2007 | American Mathematical Society One-Hour Invited Address |
| 2013- | Fellow of the American Mathematical Society (Class of 2013, Inaugural Class) |

Administrative Experience

Chair of the Colloquium/Visitor Committee 2000-012000-01MSRI Representative for Utah St. University Chair of the Facilities Committee 2003-04 2004 Co-Director of the University of Georgia VIGRE Program, January-April 2005-07Chair of the VIGRE Grant Writing Committee Director of the University of Georgia VIGRE Program 2008-152012-13Chair of the American Mathematical Society Southeastern Section Program Committee 2014-15 Faculty Senate President-Elect, University of Georgia 2015-16 Faculty Senate President, University of Georgia 2018-19Chair of the American Mathematical Society Program Committee for the National Meetings

Membership on Editorial Boards

| 2005–10 2010– | Editor for Communications in Algebra Editor for the Journal of Pure and Applied Algebra |
|------------------|---|
| 2005-06 | Editor for the Proceedings of the 2004 AMS Summer Research Institute Conference: |
| | Representations of Algebraic Groups, Quantum Groups and Lie Algebras |
| 2011 – 12 | Editor for the Proceedings of the Southeastern Lie Theory Workshop Series I (2009-11) |
| 2014 - 15 | Editor for the Proceedings of the Southeastern Lie Theory Workshop Series II (2012-14) |

Service on Departmental Committees: Utah State

| 1995 – 96 | Colloquium Committee, Search Committee |
|-----------|---|
| 1996 – 97 | Colloquium Committee, Search Committee, Graduate Committee |
| 1997 – 98 | Colloquium Committee, Graduate Committee |
| 1998 – 99 | Colloquium Committee, Graduate Committee |
| 1999-00 | Undergraduate Committee, Colloquium/Visitor Committee, Honors Committee |
| 2000 – 01 | Colloquium/Visitor Committee, Honors Committee |

Service on Departmental Committees: Georgia

2002-04Facilities Committee Executive Committee 2004-062006-07Personnel Committee Graduate Committee 2007-082008-15 VIGRE Management Committee 2009 McCay Award Selection Committee 2009-10 Cantrell Lecture Series Committee **Executive Committee** 2009-11 2015 McCay Award Selection Committee Cantrell Lecture Series Committee 2015-16 2017 McCay Award Selection Committee 2018-19 Cantrell Lecture Series Committee 2018-20 Executive Committee (Secretary: 2018-19)

University Service: Georgia

| 2011 - 15 | Office for the Vice President for Research (OVPR) Advisory Council |
|-----------|---|
| 2012 - 13 | Franklin College of Arts and Sciences Special Professorship Selection Committee |
| 2013 - 14 | Franklin College of Arts and Sciences Special Professorship Selection Committee |

- 2013–14 Franklin College of Arts and Sciences Special Professorship Selection Committee (Chair) 2012–15 Member of the Franklin College of Arts and Sciences Faculty Senate (first term)
- 2012–15 Member of the Frankin Conege of Arts and Sciences Faculty Senate (first term
- 2012–14 Member of the Franklin College Faculty Affairs Committee

Scientific Committee, Southeastern Lie Theory Network

- 2015–18 Member of the Franklin College of Arts and Sciences Faculty Senate (second term)
- 2016–17 Franklin College of Arts and Sciences Special Professorship Selection Committee
- 2016–19 Office for the Vice President for Research (OVPR) Research Awards Selection Committee
- 2017–19 Franklin College of Arts and Sciences Special Professorship Selection Committee (Chair)

National and International Service

2009-

| _000 | Scientific Committees, Southeastern Die Theory Tvetvorn |
|-----------|---|
| 2011 - 13 | American Mathematical Society Southeastern Section Program Committee |
| 2011 - 13 | American Mathematical Society Committee on Committees |
| 2014 | Chair of an Invited Address Session (Algebra) at the International Congress of Mathematicians |

American Mathematical Society, Program Committee for the National Meetings

Service as a Conference Organizer

- 1994 Organizer for the Special Session on Lie Theory at the 900th AMS Meeting in Chicago, IL
- 1997 Organizer for the Minisymposium on Lie Theory, Matrix Theory and Combinatorics at the MAA meeting in Logan, UT
- 1998 Organizer for the Special Session on Representation Theory of Algebraic Groups, Quantum Groups, and Lie Algebras at the 932nd AMS Meeting in Manhattan, KS
- 2001 Organizer for the Special Session on Representation Theory of Finite and Algebraic Groups at the National AMS Meeting in New Orleans, LA
- 2002 Organizer for a Workshop on Modular Representation Theory, Korea Institute for Advanced Study, Seoul, Korea
- 2004 Organizer for the AMS Summer Research Conference: Representations of Algebraic Groups, Quantum Groups, and Lie Algebras, Snowbird, UT
- 2005 Organizer for the Special Session on Representation Theory of Lie Algebras at the National AMS Meeting in Atlanta, GA
- 2007 Organizer for the Special Session on Cohomology and Representation Theory at the National AMS Meeting in New Orleans, LA
- 2007 Organizer for the Special Session on Lie and Representation Theory at the $1030^{\rm th}$ AMS Meeting in Murfreesboro, TN
- 2008 Chair of the Organizing Committee for a Workshop on Homological Methods in Representation Theory, Mathematical Sciences Research Institute, Berkeley, CA
- 2009 Organizer for the Special Session on Representation Theory of Lie Algebras and Algebraic Groups at the National AMS Meeting in Washington D.C.
- 2010 Organizer for the VIGRE Summer School on Lie and Representation Theory (two weeks) University of Georgia, Athens, GA
- 2010 Chair of the Organizing Committee for the Workshop on Lie Theory, Homological Methods and Applications, University of Georgia, Athens, GA
- 2011 Organizer for the Special Session on Lie Algebras, Algebraic Groups and Related Topics at the National AMS Meeting in New Orleans, LA
- 2012 Organizer for the Conference on Categorification of Quantum Groups and Representation Theory, North Carolina State University, Raleigh, NC
- 2012 Organizer for the Summer School on Cohomology and Supports in Representation Theory University of Washington, Seattle, WA
- 2014 Chair of the Organizing Committee for the Conference on Representations of Lie Algebras and Superalgebras, University of Georgia, Athens, GA
- 2016 Organizer for the Special Session on Representation Theory of Algebraic Groups at the Naional AMS Meeting in Seattle, WA

- 2016 Organizer for the Special Session on Lie Theory, Representation Theory and Geometry at the $1117^{\rm th}$ AMS Meeting in Athens, GA
- 2017 Organizer for the Special Session on Representations of Lie Algebras at the Congress of the Americas in Montreal, Canada
- 2017 Organizer for the Special Session on Categorical Methods in Representation Theory at the $1133^{\rm rd}$ AMS Meeting in Orlando, FL
- 2018 Chair of the Organizing Committee for the RTG Summer School on Lie Theory, University of Georgia, Athens, GA
- 2018 Chair of the Organizing Committee for the Conference on Representations of Algebraic Groups and Superalgebras, University of Georgia, Athens, GA
- 2019 Organizer for the Special Session on Homological Methods in the Representation Theory of Groups and Algebras at the Joint Vietnam-USA Mathematical Meeting, Quy Nhon City, Vietnam

Other Professional Activities

| Member | American Mathematical Society | | | |
|-----------|--|--|--|--|
| Member | Phi Beta Kappa (elected 1986) | | | |
| 1991- | Refereeing duties for numerous journals | | | |
| 1992 – 06 | Reviewer for Mathematical Reviews | | | |
| 1996- | Reviewer for NSA grant proposals (including service on NSA Panels) | | | |
| 1997 - | Reviewer for NSF grant proposals (including service on 8 NSF Proposal Review Panels) | | | |
| 2000- | Reviewer for NSERC grant proposals | | | |
| 2011 | Reviewer for Simons Collaboration Grants in Mathematics | | | |
| 2011 | Consultant for the American Association for the Advancement of Science (AAAS) | | | |

Service on Thesis Committees

- 2001 Cora Neal, Utah State University, Ph.D Committee
- 2001 Russel Carlson, Utah State University, Ph.D Committee
- 2007 G. Michael Guy, University of Georgia, Ph.D Committee
- 2007 Emille K. Davie, University of Georgia, Ph.D Committee
- 2007 Philip Bergonio, University of Georgia, M.A. Committee
- 2008 Kenyon Platt, University of Georgia, Ph.D Committee
- 2009 Jeremiah Hower, University of Georgia, Ph.D Committee
- 2012 Benjamin Wyser, University of Georgia, Ph.D Committee
- 2012 Wenjing Li, University of Georgia, Ph.D Committee
- 2016 Patrick McFaddin, University of Georgia, Ph.D Committee
- 2016 Maren Turbow, University of Georgia, Ph.D Committee
- 2016 Matthew Zawodniak, University of Georgia, Ph.D Committee

Service as a Ph.D Advisor

- 1991–93 Joseph P. Gottman, Northwestern University, Secondary Ph.D Thesis Advisor Thesis: Characters on Restricted Lie Algebras
- 1993–95 Christopher P. Bendel, Northwestern University, Secondary Ph.D Thesis Advisor Thesis: Support Varieties for Infinitesimal Algebraic Groups
- 2004–08 Bobbe J. Cooper, University of Georgia, Ph.D Thesis Advisor Thesis: Support Varieties of Tilting Modules
- 2005–08 Caroline B. Wright, University of Georgia, Ph.D Thesis Advisor Thesis: Second Cohomology Groups of Frobenius Kernels
- 2005–09 Irfan Bagci, University of Georgia, Ph.D Thesis Advisor Thesis: Cohomology and Support Varieties for Lie Superalgebras
- 2009–12 Nham V. Ngo, University of Georgia, Ph.D Thesis Advisor Thesis: Cohomology and Geometry for Frobenius Kernels of Algebraic Groups
- 2010–13 Tiago Macedo, Universidade Estadual de Campinas, Co-Ph.D Thesis Advisor Thesis: Characters and Cohomology of Modules for Kac-Moody Algebras and Generalizations
- 2012–14 Andrew Talian, University of Georgia, Ph.D Thesis Advisor Thesis: Endotrivial Modules for Classical Lie Superalgebras
- 2012–15 Theresa Brons, University of Georgia, Ph.D Thesis Advisor Thesis: Rational and Line Bundle Cohomology for Reductive Algebraic Groups
- 2012–16 William Hardesty, University of Georgia, Ph.D Thesis Advisor Thesis: On Support Varieties for Algebraic Groups
- 2015–19 Ziqing Xiang, University of Georgia, Ph.D Thesis Advisor
 - Thesis: Representation Theory for Schur and Hecke Algebras of Classical Type
- 2016–19 Andrew Maurer, University of Georgia, Ph.D Thesis Advisor Thesis: Cohomology and Support Varieties for Classical Lie Superalgebras
- 2018- Lee (Andy) Jenkins, University of Georgia, Ph.D Thesis Advisor
- 2019- David Galban, University of Georgia, Ph.D Thesis Advisor

Service as a Postdoctoral Advisor

- 2001–03 David Hemmer, University of Georgia, Senior Sponsoring Scientist for NSF Postdoctoral Fellow
- 2003–06 Nadia Mazza, University of Georgia, Postdoctoral Research Advisor
- 2004–07 Jonathan Kujawa, University of Georgia, Senior Sponsoring Scientist for NSF Post-doctoral Fellow
- 2004–05 Su-ion Ih, University of Georgia, Postdoctoral Teaching Advisor
- 2008–10 Benjamin Jones, University of Georgia, Postdoctoral Research Advisor
- 2009–12 Christopher Drupieski, University of Georgia, Postdoctoral Research Advisor
- 2014–17 Abbey Bourdon, University of Georgia, Postdoctoral Teaching Advisor
- 2015–18 Paul Sobaje, University of Georgia, Postdoctoral Research Advisor
- 2016–19 Kyle Chapman, University of Georgia, Postdoctoral Teaching Advisor
- 2017–20 Chun-Ju Lai, University of Georgia, Postdoctoral Research Advisor

Other Advising

- 1995–96 Amanda Brown, Utah St. University, Senior Honors Thesis Advisor
- 1999–00 Kady Schneiter, Utah St. University, Masters Thesis Advisor

Lectures

1989 Algebra Seminar, Yale University, May

1990 Algebra Seminar, Yale University, April

Algebra Seminar, Auburn University, October

Algebra Seminar, University of Washington, December

1991 Algebra Seminar, North Carolina St. University, March

Algebra Seminar, Auburn University, April

Algebra Seminar, University of Washington, August

1992 Algebra Seminar, Northwestern University, February

Algebra Seminar, Yale University, April

Lie Theory Seminar, University of Wisconsin, Madison, April

Conference on the Structure and Representation Theory of Lie Algebras, Yale University, April

Conference on Connections between Topology and Representation Theory, Northwestern University, May

Algebra Seminar, University of Washington, August

1993 Midwest Group Theory Seminar, University of Chicago, March

Colloquium, Auburn University, March

Colloquium, University of Georgia, March

Algebra Seminar, University of Virginia, March, April

Colloquium, Johns Hopkins University, April

Algebra Seminar, Yale University, April

III International Conference on Non-associative Algebra and its Applications, University of Oviedo, Spain, July

1994 Algebra Seminar, University of Washington, January

Colloquium, Kansas St. University, January

Algebra Seminar, Kansas St. University, January

Colloquium, Michigan St. University, February

Series of four lectures on Representations of Algebraic Groups and Lie Algebras, Queens University, Kingston Ontario, Canada, February

Colloquium, Utah St. University, March

890th AMS Meeting at Kansas St. University, Special Session on Representations of Algebraic and Quantum Groups, March

Algebra Seminar, Northwestern University, April

1994 Algebra Seminar, University of Florida, April

Contributed Talk, Canadian Mathematical Society Conference on Representations of Groups and Algebras, Banff, Canada, June

895th AMS Meeting at Oklahoma St. University, Special Session on Representations of Algebraic Groups, October

Lie Theory Seminar, University of Wisconsin, Madison, December

1995 897th AMS Meeting at San Francisco, CA, Special Session on Cohomology of Finite Groups, January

Symposium on Lie Algebras and their Representation Theory, Invited Lectures (2), Seoul National University, Korea, January

Algebra Seminar, Northwestern University, February

Topology Seminar, Northwestern University, March

Colloquium, University of Windsor, April

Algebra Seminar, University of Virginia, April

1996 908th AMS Meeting in Orlando, FL, Special Session on Algebra, Cohomology and Polynomial Identities, January

Colloquium, Kansas St. University, March

Algebra Seminar, Northwestern University, April

911th AMS Meeting in Baton Rouge, LA, Special Session on Representations of Finite Groups, Algebraic Groups and Lie Algebras, April

Monster/Lie Algebra Conference at the Ohio St. University, Invited Talk, May

Conference on Combinatorial Matrix Theory at Utah St. University, May

AMS Summer Research Institute at Seattle, WA, Plenary Talk, July

1997 Colloquium, University of Wyoming (sponsored by the Rocky Mountain Consortium), March

Representation Theory Seminar, University of Utah, March

MAA Special Session on Lie Theory, Matrix Theory and Combinatorics, Utah St. University, April

Algebra Seminar, Oxford University, June

Representation Theory Seminar, Oxford University, June

AMS Summer Research Conference at Seattle, WA, July

 $1998-932^{\rm nd}$ AMS Meeting in Manhattan, KS, Special Session on Cohomology of Finite Groups, March

Algebra Seminar, Northwestern University, April

Group Theory Seminar, University of Chicago, April

Lie Theory Seminar, University of Wisconsin, Madison, April

Representation Theory Seminar, Princeton University, May

Symposium on Modular Representations of Finite Groups, University of Virginia, May

Algebra Seminar, University of Washington, May

Colloquium, University of Oregon, May

International Conference on Representation Theory, East China Normal University, Shanghai, China, June

Algebra Seminar, Aarhus University, Denmark, July

Group Theory Seminar, University of Georgia, October

Colloquium, University of South Alabama, (sponsored by NSF EPSCoR program), October

Colloquium, Auburn University, (sponsored by NSF EPSCoR program), October

Algebra Seminar, University of Virginia, December

1999 Algebra Seminar, Yale University, March

U. C. Lie Theory Conference, Invited Talk, University of California, Santa Cruz, April 943rd AMS Meeting in Buffalo, NY, Special Session on Representation Theory of Lie Algebras, April

Colloquium, Kansas St. University, June

945th AMS Meeting in Melbourne, Australia (joint with Australian Math. Soc.) Special Session on Algebraic Groups and Related Topics, July

2000 Colloquium, University of California, Riverside, March

Group Theory Seminar, University of Chicago, April

953rd AMS Meeting in South Bend, IN, Special Session on Representation Theory of Groups and Related Objects, April

Conference on Representation Theory and Computational Algebra, University of Georgia, May

Conference on Group Cohomology, Oberwolfach, Germany, July

Special Topics Seminar (2 lectures), Utah St. University, October

Colloquium, University of Georgia, December

2001 962nd AMS Meeting in New Orleans, LA, Special Session on Group Cohomology with Applications to Homotopy Theory and Representation Theory, January

Special Topics Seminar, Utah St. University, February

Colloquium, University of Oregon, May

Algebra Seminar, University of Washington, May

International Conference on Representations of Algebraic and Quantum Groups, Kunming, China, July

Group Cohomology and Representation Theory Seminar, University of Georgia, September Colloquium, University of South Alabama, October

Conference on Geometric and Combinatorial Representation Theory, Seoul National University, Seoul Korea, October

2002 Lie Theory Seminar (5 lectures), University of Georgia, January-February, October

Group Cohomology and Representation Theory Seminar, University of Georgia, March

Algebra Seminar, University of Virginia, March

Conference on Lie and Jordan Algebras: their Representations and Applications, Plenary Talk, Guaruja, Brazil, May

AMS Summer Research Conference: Groups, Representations and Cohomology, Plenary Talk, South Hadley, MA, June

Symposium on Algebraic Groups, Invited Lectures (3), Osaka City University, Osaka, Japan, June

980th AMS Meeting in Madison, WI, Special Session on Lie Theory, October

Workshop on Modular Representation Theory, Korea Institute for Advanced Study, Seoul, Korea, October

VIGRE Seminar, University of Georgia, November

2003 Algebra Seminar, Oxford University, January

Algebra Seminar, University of Warwick, February

Lie Theory Seminar, University of Warwick, February

Representation Theory Seminar, Oxford University, February

Pure Maths Seminar, University of Bristol, February

Pure Maths Seminar, University of Leicester, March

Workshop of Geometric Representation and Invariant Theory, Plenary Talk, University of Manchester, March

Conference on the Representation Theory of Finite Groups, Oberwolfach Germany, March Algebra Seminar, University of Leeds, April

Bristol-Leicester-Oxford Colloquium, University of Leicester, April

Mini-Workshop on Representations of Algebraic Groups and Lie Algebras, University of Birmingham, May

Infinite Dimensional Lie Theory Workshop, Invited Talk, Fields Institute, Toronto, Canada, July

VIGRE Algebra Seminar, University of Georgia, September, October, November

Lie Theory Seminar, University of Georgia, September

VIGRE Seminar, University of Georgia, October

991th AMS Meeting in Chapel Hill, NC, Special Session on Group Cohomology in Algebra and Geometry, October

Conference on Groups, Representations and Galois Theory, in honor of Walter Feit, Invited Talk, Yale University, October

Group Cohomology and Representation Theory Seminar (3), University of Georgia, November

2004 VIGRE Algebra Seminar, University of Georgia, January, February, March

Algebra Seminar, University of Georgia, February, April

Conference on Geometric Representation Theory, Invited Talk, University of Warwick, England, March

Conference on Lie and Jordan Algebras: their Representations and Applications II, Plenary Talk, Guaruja, Brazil, May

Algebra Seminar, University of Virginia, May

Algebra Seminar, University of Washington, July

Conference on Algebraic Cycles, K-theory, and Modular Representation Theory, Plenary Talk, Northwestern University, September

Conference on Interaction of Finite Dimensional Algebras with Other Areas of Mathematics, Banff International Research Station, Banff, Canada, September

Groups-Representations-Cohomology Seminar, Ohio State University, October

2005 1003rd AMS Meeting in Atlanta, GA, Special Session on Modular Representation Theory of Finite and Algebraic Groups, January

VIGRE Algebra Seminar, University of Georgia, January, February, September, October

Algebra Seminar (4 lectures), University of Georgia, February, October

International AsiaLink Conference on Algebras and Representations, Plenary Talk, Beijing Normal University, P.R. China, May

Series of Invited Lectures (2), Programme on Group Representation Theory, Bernoulli Centre, Ecole Polytechnique Federale de Lausanne, Switzerland, June

VIGRE Seminar, University of Georgia, August

Conference on Cohomology of Finite Groups: Interactions and Applications, Oberwolfach, Germany, September

1012th AMS Meeting in Eugene, OR, Special Session on Representations of Groups and Algebras, November

Algebra Seminar, University of Washington, November

1013th AMS Meeting in Taichung, Taiwan, Special Session on Lie Algebra and Representation Theory, December

2006 Conference on Representation Theory of Finite Groups, Oberwolfach, Germany, March Algebra Seminar, University of Virginia, April

Geometric Methods in Representation Theory Seminar, University of North Carolina, April Colloquium, Virginia Tech, April

1018th AMS Meeting in San Francisco, CA, Special Session on Lie Algebras and Applications, April

VIGRE Algebra Seminar, University of Georgia, August, September, November

Algebra Seminar, University of Georgia, November

Algebra Seminar, University of Rochester, November

Topology Seminar, University of Rochester, November

2007 1024th AMS Meeting in Davidson, NC, Special Session on Geometric and Combinatorial Methods in Representation Theory, March

Algebra Seminar, University of Virginia, March

Shoemaker Distinguished Lecture Series (3 lectures), University of Toledo, April

Conference on Lie Theory, Banff International Research Station, Banff, Canada, May

Algebra and Algebraic Geometry Seminar, University of Washington, June

Algebraic and Geometric Representation Theory Conference, Plenary Talk, Aarhus University, Denmark, June

Conference on Algebras, Representations and Applications Lie and Jordan Algebras, their Representations and Applications - III, Plenary Talk, Brazil, August

Conference on Group Embeddings, Banff International Research Station, Banff, Canada, September

Invited One-Hour Address, American Mathematical Society Fall Sectional Meeting, Murfreesboro, TN, November

2008 Algebra Seminar, University of Georgia, January

Conference on Representation Theory of Finite Dimensional Algebras, Oberwolfach, Germany, February

Homological Methods in Representation Theory Seminar, MSRI, Berkeley, CA, March

Colloquium, University of British Columbia, April

Algebra/Topology Seminar, University of British Columbia, April

Algebra Seminar, Emory University, April

1040th AMS-SBM Meeting in Rio de Janeiro, Brazil, Special Session on Lie Algebras and their Applications, June

1043rd AMS Meeting in Kalamazoo, MI, Special Session on Computation in Modular Representation Theory and Cohomology, October

1045th AMS-SMS Meeting in Shanghai, China, Special Session on Representations of Groups and Algebras, December

2009 Mini-Workshop on Support Varieties, (3 invited lectures), Oberwolfach, Germany, February 1048th AMS Meeting in Raleigh, NC, Special Session on Kac-Moody Algebras, Vertex Algebras, Quantum Groups, and Applications, April

Algebra Seminar, University of Virginia, May

Conference on Representation Theory and Lie Theory, Plenary Talk, Isaac Newton Institute for Mathematical Sciences, Cambridge, England, June

Second Summer School on Lie Theory and Representation Theory, Invited Lecture Series (6 lectures), East China Normal University, Shanghai, China, July

Workshop on Lie Theory and Representation Theory, Plenary Talk, East China Normal University, Shanghai, China, July

International Workshop on Algebraic Groups, Quantum Groups and Related Topics, Plenary Talk, Peking University, Beijing, China, July

International Workshop on Quantized Algebras and Physics, Invited Talk, Chern Institute of Mathematics, Nankai University, Tianjin, China, July

National Mathematics Summer School, Peking University, Beijing, China, July

International Workshop on Lie Algebras and Related Topics, Plenary Talk, National Institute for Mathematical Sciences, Daejon, Korea, October

Algebra Seminar, University of Georgia, October

Algebra and Algebraic Geometry Seminar, University of Washington, December

2010 Algebra Seminar (2), University of Sydney, March

Algebra Seminar, University of Melbourne, April

Colloquium, University of New South Wales, June

Fifth International Conference on Representation Theory, Plenary Talk, Xian, China, August VIGRE Algebra Seminar (2), University of Georgia, August-September

1062nd AMS Meeting in Syracuse, NY, Special Session on Lie Algebras and Representation Theory, October

Algebra Seminar, University of Georgia, November

Taipei Conference on Representation Theory, Plenary Talk, Academia Sinica, Taipei, Taiwan December

2011 U.C. Lie Theory Workshop, Louisiana State University, February

Colloquium, University of Virginia, March

Mini-workshop on Modular Representations of Symmetric Groups and Related Objects, Oberwolfach, Germany, April

1074th AMS Meeting in Lincoln, NE, Special Session on Quantum Groups and Representation Theory, October

Colloquium, Baylor University, October

Colloquium, University of Texas, Arlington, October

1075th AMS Meeting in Salt Lake City, UT, Special Session on Noncommutative Geometry and Algebra, October

Southwest Group Theory Day 2011, University of Arizona, November

2012 1077th AMS Meeting in Boston, MA, Special Session on Linear Algebraic Groups: their Arithmetic, Geometry and Representations, January

Colloquium, University of Southern California, February

1079th AMS Meeting in Tampa, FL, Special Session on Representations of Algebraic Groups and Related Structures, March

Conference on the Representation Theory of Finite Groups, Oberwolfach Germany, March Workshop on Cohomology Bounds and Growth Rates, American Institute for Mathematics, Palo Alto, CA, Extemporary Talks, June

Conference on Cohomology and Supports in Representation Theory, University of Washington, Plenary Talk, July

Conference on Lie Algebras and Applications, Plenary Talk, Uppsala University, Sweden, September

1085th AMS Meeting in Tucson, AZ, Special Session on Representations of Groups and Algebras, October

Algebra Seminar, University of Georgia, November

2013 Algebra Seminar, University of Texas at Arlington, February

Colloquium, College of Charleston, March

Colloquium, University of Oregon, April

III International Symposium on Groups, Algebras and Related Topics, Peking University, Invited Talk, June

International Conference on Representation Theory VI, Zhangjiajie, China, Plenary Talk, June

Algebra Seminar (2), Morningside Institute, Beijing, China, July

Colloquium, Chinese Academy of Sciences, Beijing, China, July

Congress of the Americas, Special Session on Lie Representation Theory, Guanajuato, Mexico, August

Algebra Seminar, University of Georgia, August

2014 Algebra Seminar (2), University of Georgia, January, February

Joint Mathematics Meetings for the AMS and MAA, MAA Invited Paper Session, The Unreasonable Effectiveness of Modern Mathematics, Baltimore, MD, January

Algebra and Algebraic Geometry Pre-Seminar, University of Washington, February

Algebra and Algebraic Geometry Seminar, University of Washington, February

1097th AMS Meeting in Knoxville, TN, Special Session on Geometric and Combinatorial Methods in Lie Theory, March

Geometric Methods in Representation Theory Seminar, University of North Carolina, March Conference on Representations of Algebraic Groups, Invited Talk, University of Lyon, France, July

ICM 2014 Satellite Conference on Representation Theory and Related Topics, Invited Talk, Daegu, South Korea, August

Conference on Representations of Algebraic Groups and Related Objects, Plenary Talk, Friedrich-Schiller Universitat, Jena, Germany, September

Algebra Seminar, University of Georgia, September

Algebra, Geometry, Combinatorics Day (ALGECOM11), Plenary Talk, DePaul University, Chicago, IL, October

1105th AMS Meeting in Greensboro, NC, Special Session on Exceptional Groups in Physics, Algebra and Geometry, November

2015 USA-Mexico Conference in Representation Theory and Non-Commutative Algebra, Plenary Talk, Instituto de Matmaticas, UNAM, Mexico, January

Invited Seminar Speaker, Mittag-Leffler Institute, Stockholm, Sweden, February

Southwestern Group Theory Day, Invited Talk, University of Arizona, March

Conference on Cohomology of Finite Groups: Interactions and Applications, Oberwolfach, Germany, May

2016 Joint Mathematics Meetings, AMS Special Session on Geometric and Categorical Methods in Representation Theory, Seattle, WA, January

Conference on Vertex Algebras and Quantum Groups, Banff International Research Station, Banff, Canada, Invited Talk, February

Algebra Seminar, DePaul University, Chicago, IL, March

Workshop on Sheaves and Modular Representations of Reductive Groups, American Institute for Mathematics, San Jose, CA, Invited Talk, March

Oberseminar, University of Georgia, May

Southeastern Lie Theory Workshop IX, University of Virginia, Plenary Talk, May

Conference on Triangulated Categories and Applications, Banff International Research Station, Banff, Canada, Invited Talk, June

PIMS Workshop on Geometric and Topological Aspects of the Representation Theory of Finite Groups, Vancouver, Canada, Plenary Talk, August

Workshop on Endo-p-Permutation Modules in the Representation Theory of Finite Groups, Bernoulli Centre, EPFL, Lausanne, Switzerland, Plenary Talk, September

Algebra Seminar, University of Georgia, September

1124th AMS Meeting in Raleigh, NC, Special Session on Representation Theory of Lie Algebras, Quantum Groups and Related Stuctures, November

2017 Joint Mathematics Meetings, AMS Special Session on Group Representations and Cohomology, Atlanta, GA, January

Colloquium, Auburn University, February

Algebra Seminar, University of Georgia, February

Algebra and Algebraic Geometry Seminar, University of Washington, May

Congress of the Americas, Special Session on Cohomology of Groups, Montreal, Canada, July

Satellite Workshop on Representation Theory, Plenary Talk, University of Laval, Quebec City, Canada, July

1132nd AMS Meeting in Buffalo, NY, Special Session on Recent Advancements in Representation Theory, September

Colloquium, Georgia Southern University, October

2018 Group Representation Theory and Applications Seminar, MSRI, Berkeley, CA, February Algebra Seminar, University of Georgia, April

1139th AMS Meeting in Boston, MA, Special Session on Hopf Algebras, Tensor Categories, and Homological Algebra, April

Algebra and Representation Theory Seminar, University of Stuttgart, Germany, July

Conference on Algebraic Representation Theory, Plenary Talk, University of Stuttgart, Germany, July

ICM 2018 Satellite Conference on Algebras, Representations and Applications, Plenary Talk Cusco, Peru, August

Pure Math Seminar, University of South Alabama, October

Algebra Seminar, University of Georgia, November

Colloquium, University of Reno, Nevada, November

Algebra and Algebraic Geometry Seminar, University of Washington, December

Teaching Experience, Courses Taught

Berkeley: 1984–86 Calculus of One Variable (tutor/reader)

Yale: 1986–87 115a Calculus of One Variable (problem session)

1987–88 222b Linear Algebra (discussion section)

 $1988–89\quad 115 b\quad Calculus of One Variable$

1989–90 115a Calculus of One Variable

115b Calculus of One Variable

Auburn: 1990-91 161 Analytic Geometry and Calculus

266 (2) Introduction to Linear Algebra

264 Analytic Geometry and Calculus

265 Linear Differential Equations

331 Introduction to Abstract Algebra

Northwestern: 1991–92 B14–2 Calculus

C37 Introduction to Modern Algebra

B15 Multiple Integration and Vector Calculus

B17 Sequences and Series, Linear Algebra

C34 Linear Algebra and its Applications

1992–93 D84 Lie Algebras

E11–2 Seminar: Representation Theory of Algebraic Groups

and Lie Algebras

1993–94: C37 Introduction to Modern Algebra

1994–95: B14–2 Calculus

B14-1 Calculus

Utah State: 1995–96 531 Introduction to Group Theory

532 Introduction to Ring Theory

533 Galois Theory

731 Lie Algebras

732 Representations of Finite Groups

1996–97 220 Calculus

221 Calculus

631 Graduate Algebra

632 Graduate Algebra

633 Graduate Algebra

| | 1997–98 | 532 731 732 | Introduction to Group Theory Introduction to Ring Theory Representation Theory of Groups Representation Theory of Lie Algebras Graduate Algebra Graduate Algebra Honors Calculus | |
|----------|-----------|-------------------|--|---|
| | 1998–99 | 6320 | | |
| | 1999-00 | 1100 | Calo | culus |
| | | | | dern Algebra |
| | | | | dern Algebra |
| | 2000 01 | | _ | presentation Theory |
| | 2000-01 | | | duate Algebra |
| | | | | ear Algebra |
| | | | | duate Algebra culus |
| | | 1100 | Car | cuius |
| Georgia: | 2001-02 | 2200 (2) | | Calculus |
| G00181a. | 2001 02 | 2210 | | Calculus |
| | | 2700 | | Differential Equations |
| | 2002-03 | 2200 | | Calculus |
| | | 8000 | | Graduate Algebra |
| | 2003 – 04 | 2200 | | Calculus |
| | | 4000/600 | 00 | Modern Algebra and Geometry I |
| | | 4010/601 | | Modern Algebra and Geometry II |
| | | 8010 | | Graduate Algebra |
| | | 8850 | | Algebra VIGRE Research Group |
| | 2004-05 | 3200 | | Introduction to Higher Mathematics |
| | | 8190 | | Representation Theory of Algebraic Groups |
| | 0005 00 | 8850 | | Algebra VIGRE Research Group |
| | 2005–06 | 2210 | | Calculus Harver Calculus |
| | | 2310H 8850 | | Honors Calculus Algebra VIGRE Research Group |
| | 2006-07 | 2200 (2) | | Calculus |
| | 2000 01 | 2210 | | Calculus |
| | | 8030 | | Representation Theory |
| | | 8850 | | Algebra VIGRE Research Group |
| | 2007-08 | 2200 | | Calculus |
| | | 2700 | | Differential Equations |
| | | 8030 | | Homological Algebra/Commutative Rings |
| | | 8850 | | Algebra VIGRE Research Group |
| | 2008-09 | 2250(2) | | Calculus (for Scientists and Engineers) |
| | 2009–10 | 2200 | | Calculus |
| | | 8190 | | Representation Theory of Algebraic Groups |
| | | 8850 | | Algebra VIGRE Research Group |

| 2010-11 | 4000/6000 | Modern Algebra and Geometry I |
|-----------|-----------|---|
| | 4010/6010 | Modern Algebra and Geometry II |
| | 8850 | Algebra VIGRE Research Group |
| 2011-12 | 8000 | Graduate Algebra |
| 2012 - 13 | 2200 | Calculus |
| | 8190 | Representation Theory of Algebraic Groups |
| 2013 - 14 | 2250 | Calculus (for Scientists and Engineers) |
| | 3000 | Linear Algebra |
| 2014 - 15 | 3000 | Linear Algebra |
| | 8190 | Representation Theory of Algebraic Groups |
| 2015 - 16 | 3000 | Linear Algebra |
| | 8000 | Graduate Algebra |
| 2016-17 | 2260 | Calculus (for Scientists and Engineers) |
| | 3300 | Applied Linear Algebra |
| | 8850 | Algebra Vertical Research Group |
| 2017-18 | 3300 | Applied Linear Algebra |
| | 8080 | Lie Algebras |
| 2018-19 | 3300(2) | Applied Linear Algebra |
| 2019-20 | 8000 | Graduate Algebra |
| | 2260 (?) | Calculus (for Scientists and Engineers) |

- 1. Brauer-type reciprocity over a class of graded associative algebras (with R. Holmes), *J. Algebra* 144 (1991), 117–126.
- 2. Projective modules over Lie algebras of Cartan type, *Memoirs Amer. Math. Soc.* **98** no. 470 (1992).
- 3. Filtrations for periodic modules over restricted Lie algebras, *Indag. Math.* 3 no. 1 (1992), 59–68.
- 4. Block degeneracy and Cartan invariants for Lie algebras of Cartan type (with R. Holmes), *J. Algebra* **161** (1993), 155–170.
- 5. Homomorphisms inducing isomorphisms in Lie algebra cohomology, *J. Pure Appl. Algebra* 90 (1993), 49–54.
- 6. On the cohomology of the Witt algebra: W(1,1), Proc. III International Conference on Non-associative algebra and its applications (ed. S. Gonzales), Kluwer (1994).
- 7. A bound for the complexity of G_rT -modules, Proc. Amer. Math. Soc. 123 (2) (1995), 335–341.
- 8. On the vanishing of extensions of modules over reduced enveloping algebras (with J. Carlson and K. Peters), *Math. Annalen* 302 (1995), 541–560.
- 9. Algebraic group techniques in the representation and cohomology theory of Lie algebras of Cartan type (with Z. Lin), *J. Algebra* 179 (1996), 852–888.
- 10. Infinitesimal Schur algebras (with S. Doty and K. Peters), *Proc. London Math. Soc.* 72 (3) (1996), 588–612.
- 11. On the construction of indecomposable modules over restricted enveloping algebras (with R. D. Pollack), J. Pure Appl. Algebra 90 (1996), 61–73.
- 12. Complexity and support varieties for finite-dimensional algebras, Cont. Math. 194 (1996), 201–218.
- 13. Polynomial representations of Frobenius kernels of GL_2 , (with S. Doty and K. Peters), Cont. Math. 194 (1996), 57–67.
- 14. Representations of Hopf algebras arising from Lie algebras of Cartan type (with Z. Lin), *J. Algebra* 189 (1997), 529–567.
- 15. Infinitesimal Schur algebras of finite representation type (with S. Doty and K. Peters), Quart. J. Math. Oxford (2) 48 (1997), 323–345.
- 16. Varieties for G_rT -modules, Proc. of Symposia in Pure Mathematics 63 (1998), 441–451.
- 17. Representation theory of the Witt algebra (with J. Feldvoss), J. Algebra 203 (1998), 447–469.

- 18. Good filtrations for Hopf algebras arising from Lie algebras of Cartan type (with Z. Lin), *J. Pure and Appl. Algebra* 127 (1998), 231–256.
- 19. Semisimplicity of Schur algebras, (with S. Doty), Math. Proc. Cambridge Phil. Soc. 124 no. 1 (1998), 15–20.
- 20. Support varieties for the Steenrod algebra (with J. Palmieri), Math. Zeit. 227 no. 4 (1998), 663–684.
- 21. Representation theory of Lie algebras of Cartan type, The Monster and Lie Algebras: Proceedings of a Special Research Quarter at The Ohio St. University, (ed. J. Ferrar, K. Harada), de Gruyter (1998), 235–252.
- 22. Complexes and vanishing of cohomology for group schemes (with C. Bendel), *J. Algebra* 214 (1999), 668–713.
- 23. Complexity for modules over finite Chevalley groups and classical Lie algebras (with Z. Lin), *Inventiones Math.* 138 (1999), 85–101.
- 24. Representation type for Schur algebras (with S. Doty, K. Erdmann, and S. Martin), *Math. Zeit.* 232 (1999), 137–182.
- 25. Extensions of modules over Hopf algebras arising from Lie algebras of Cartan type (with Z. Lin), Algebras and Representation Theory 3 (2000), 43–80.
- 26. Blocks of finite representation type in reduced enveloping algebras of classical Lie algebras (with R. D. Pollack), J. London Math. Soc. 61 (2000), 374–394.
- 27. Some recent developments in the representation theory of general linear and symmetric groups, *Representations and Quantizations*, Proceedings of the International Conference on Representation Theory (Shanghai, China), Springer-Verlag, 2000, 357–374.
- 28. Relating the cohomology of the general linear group and the symmetric group (with S. Doty), *Modular Representation Theory of Finite Groups*, Proceedings of a Symposium at the University of Virginia, Walter de Gruyter, 2001, 175–187.
- 29. On comparing the cohomology of algebraic groups, finite Chevalley groups and Frobenius kernels (with C. Bendel and C. Pillen), *J. Pure and Appl. Algebra* 163 (2001), 119–146.
- 30. Representation type for the blocks of Category \mathcal{O} (with V. Futorny and R. D. Pollack), Quart. J. Math. Oxford 52 (2001), 285–305.
- 31. On comparing the cohomology of general linear groups and symmetric groups (with A. S. Kleshchev), *Pacific J. Math.* 201 (2001), 339–355.
- 32. Representation type of quantum Schur algebras (with K. Erdmann), *Transactions of AMS* 353 (2001), 4729–4756.
- 33. Representation type of Hecke algebras (with K. Erdmann), Transactions of AMS 354 (2002), 275-285.

- 34. Support varieties for algebraic groups (with B. Parshall and D. Vella), *J. Reine Angew. Math.* 547 (2002), 15–49.
- 35. Extensions for finite Chevalley groups II (with C. Bendel and C. Pillen), *Transactions of AMS* 354 (2002), 4421–4454.
- 36. Support varieties of modules for symmetric groups (with D. Hemmer), J. Algebra 254 (2002), 422–440.
- 37. The restricted nullcone (with J. Carlson, Z. Lin and B. Parshall), Cont. Math. 325 (2003), 51–75.
- 38. The nucleus for restricted Lie algebras (with D. Benson), *Proc. Amer. Math. Soc.* 131 (2003), 3395–3405.
- 39. Extensions for Frobenius kernels (with C. Bendel and C. Pillen), *J. Algebra* 272 (2004), 476–511.
- 40. Extensions of modules over Schur algebras, symmetric groups, and Hecke algebras (with S. Doty and K. Erdmann), Algebras and Representation Theory 7 (2004), 67–100.
- 41. Extensions for finite Chevalley groups I (with C. Bendel and C. Pillen), *Advances in Math.* 183 (2004), 380–408.
- 42. Specht filtrations for Hecke algebras of type A (with D. Hemmer), J. London Math. Soc. 69 (2004), 623–638.
- 43. Varieties of nilpotent elements for simple Lie algebras I: Good Primes, (with the UGA VIGRE Algebra Group), J. Algebra 280 (2004), 719–737.
- 44. Nilpotent elements and support varieties for simple Lie algebras, *Resenhas* 6 no. 2/3 (2004), 281–290.
- 45. Extensions for finite groups of Lie type: Twisted Groups (with C. Bendel and C. Pillen), Finite Groups 2003 (held at the University of Florida), de Gruyter, New York, 2004, 29–46.
- 46. Representation type of the blocks of Category \mathcal{O}_S (with B. Boe), Advances in Math. 196 (2005), 193–256.
- 47. Varieties of nilpotent elements for simple Lie algebras II: Bad Primes, (with the UGA VIGRE Algebra Group), J. Algebra 292 (2005), 65–99.
- 48. On the realization of orbit closures as support varieties (with T. Tanisaki), *J. Pure and Applied Algebra* 206 (2006), 66–82.
- 49. Representation type for Schur superalgebras (with D. Hemmer and J. Kujawa), *J. of Group Theory* 9 (2006), 283–306.
- 50. Endotrivial groups for finite Chevalley groups (with J. Carlson and N. Mazza), *J. Reine Angew. Math.* 595 (2006), 93–120.

- 51. Extensions for finite groups of Lie type II: Filtering the truncated induction functor (with C. Bendel and C. Pillen), *Cont. Math.* 413 (2006), 1–23.
- 52. On the cohomology of Specht modules (with D. Hemmer), J. Algebra 306 (2006), 191–200.
- 53. Second cohomology for Frobenius kernels and related structures (with C. Bendel and C. Pillen), *Advances in Math.* 209 (2007), 162–197.
- 54. Support varieties for Weyl modules over bad primes (with the UGA VIGRE Algebra Group), J. Algebra 312 (2007), 602–633.
- 55. Projective modules for Chevalley groups and Frobenius kernels (with Z. Lin), Bulletin of the London Math. Soc. 39 (2007), 1019-1028.
- 56. Category \mathcal{O} for the Virasoro algebra: Cohomology and Koszulity (with B. Boe and E. Wiesner), *Pacific J. Math.* 234 (2008), 1-21.
- 57. Support varieties for modules over Chevalley groups and classical Lie algebras (with J. Carlson and Z. Lin), *Transactions of AMS* 360 (2008), 1879-1906.
- 58. Endotrivial modules for the symmetric group (with J. Carlson and N. Mazza), *Proceedings of the Edinburgh Math. Soc.* 51 (2008), 1-22.
- 59. Cohomology and support varieties for the Lie superalgebra W(n) (with I. Bagci and J. Kujawa), International Math. Research Notices, doi:10.1093/imrn/rnn115, (2008).
- 60. Cohomology and support varieties for Lie superalgebras II (with B. Boe and J. Kujawa), *Proceedings of the London Math. Soc.*, 98 (2009), 19-44.
- 61. On Kostant's theorem for Lie algebra cohomology (with the UGA VIGRE Algebra Group), Cont. Math., 478 (2009), 39-60.
- 62. Ext¹-quivers for the Witt algebra W(1,1) (with B. Boe and E. Wiesner), J. Algebra, 322 (2009), 1548-1564.
- 63. An analog of Kostant's theorem for the cohomology of quantum groups (with the UGA VIGRE Algebra Group), *Proceedings of the AMS*, 138 (2010), 85-99.
- 64. On the cohomology of Young modules for the symmetric group (with F. Cohen and D. Hemmer), Advances in Math., 224 (2010), 1419-1461.
- 65. Cohomology and support varieties for Lie superalgebras (with B. Boe and J. Kujawa), *Transactions of the AMS*, **362** (2010), 6551-6590.
- 66. Complexity and module varieties for classical Lie superalgebras (with B. Boe and J. Kujawa), *International Math. Research Notices*, (2011), No. 3, 696-724.
- 67. Endotrivial modules for finite group schemes (with J. Carlson), J. Reine Angew. Math., 653 (2011), 149-178.

- 68. Detecting cohomology for Lie superalgebras (with G. Lehrer, R. Zhang), Advances in Math., 228 (2011), 2098-2115.
- 69. On the vanishing ranges for the cohomology of finite groups of Lie type (with C. Bendel and C. Pillen), *International Math. Research Notices*, doi:10.1093/imrn/rnr30, (2011).
- 70. On the support varieties for Demazure modules (with B. Jones), *J. Australian Math. Soc.*, 91 (2011), 343-363.
- 71. Endotrivial modules for finite group schemes II (with J. Carlson), Bulletin of the Institute of Mathematics Academia Sinica, 7 (2012), 271-289.
- 72. Differentiating Weyl's generic dimension formula with applications to support varieties, (with C. Drupieski and B. Parshall), *Advances in Math.*, 229 (2012), 2656-2668.
- 73. Second cohomology for finite groups of Lie type (with UGA VIGRE Algebra Group), *J. Algebra*, **360** (2012), 21-52.
- 74. Cohomology for infinitesimal unipotent algebraic and quantum groups (with C. Drupieski and N. Ngo), *Transformation Groups*, 17 (2012), 393-416.
- 75. Cohomology of algebraic groups, finite groups, and Lie algebras: Interactions and Connections, Lie Theory and Representation Theory, Survey of Modern Mathematics Volume II (edited by N. Hu, B. Shu, J.P. Wang), International Press, 2012, pp. 151-176.
- 76. On the vanishing ranges for the cohomology of finite groups of Lie type II (with C. Bendel and C. Pillen), *Proc. of the Symposia of Pure Mathematics*, 86 (2012), 25-73.
- 77. Complexity for modules over the classical Lie superalgebra $\mathfrak{gl}(m|n)$ (with B. Boe and J. Kujawa), Compositio Math., 148 (2012), 1561-1592.
- 78. First cohomology of finite groups of Lie type: simple modules with small dominant weights (with the UGA VIGRE Algebra Group), *Transactions of the AMS*, **365** (2013), 1025-1050.
- 79. Cohomology for quantum groups via the geometry of the nullcone (with C. Bendel, B. Parshall and C. Pillen), *Memoirs of the AMS*, 229, no. 1077, (2014).
- 80. Extensions for finite Chevalley groups III: Rational and Generic Cohomology (with C. Bendel and C. Pillen), *Advances in Math.*, 262 (2014), 484-519.
- 81. On the structure of cohomology rings of *p*-nilpotent Lie algebras (with J. Carlson), *Transformation Groups*, **19** (2014), 721-734.
- 82. Bounding the dimension of rational cohomology groups (with C. Bendel, B. Boe, C. Drupieski, B. Parshall, C. Pillen, and C. Wright), *Current Developments and Retrospectives in Lie Theory: Algebraic Methods*, Developments in Mathematics (edited by G. Mason, I. Penkov, J.A. Wolf), Springer-Verlag, 2014, 51-69.
- 83. Endotrivial modules for the general linear group in a non-defining characteristic (with J. Carlson and N. Mazza), *Math. Zeitschrift*, 278 (2014), 901-925.

- 84. On good (p, r) filtrations for rational G-modules (with T. Kildetoft), J. Algebra, 423 (2015), 702-725.
- 85. Bounding extensions for finite Chevalley groups and Frobenius kernels (with C. Bendel, B. Parshall, C. Pillen, L. Scott, and D. Stewart), *Algebras and Representation Theory*, 18, (2015), 739-760.
- 86. Endotrivial modules for finite groups of Lie type A in the non-defining characteristic (with J. Carlson and N. Mazza), *Math. Zeitschrift*, 282 (2016), 1-24.
- 87. Bilinear and quadratic forms for rational modules of split reductive groups (with S. Garibaldi), Canadian J. Math., 68 (2016), 395-421.
- 88. The Lie module and its complexity (with F. Cohen and D. Hemmer), Bulletin of the London Math. Soc., 48 (2016), 109-114.
- 89. Third cohomology for Frobenius kernels and related structures (with C. Bendel, C. Pillen), *Proc. of the Symposia of Pure Mathematics*, 92 (2016), 81-118.
- 90. Globally irreducible Weyl modules (with S. Garibaldi and R. Guralnick), *J. Algebra*, 477 (2017), 69-87.
- 91. Tensor triangular geometry for Lie superalgebras (with B. Boe and J. Kujawa), *Advances in Math.*, **314** (2017), 228-277.
- 92. On the existence of mock injectives for algebraic groups (with W. Hardesty and P. Sobaje), Bulletin of the London Math. Soc., 49 (2017), 806-817.
- 93. Globally irreducible Weyl modules for quantum groups (with S. Garibaldi and R. Guralnick), Springer Proceedings in Mathematics and Statistics (Geometric and Topological Aspects of the Representation Theory of Finite Groups), Springer-Verlag International Publishing, 242, (2018), 313-336.
- 94. Support varieties for Hecke algebras (with Z. Xiang), *Homology, Homotopy and Applications*. 21(2), (2019), 1–24.
- 95. On tensoring the Steinberg module (with C. Bendel, C. Pillen and P. Sobaje), to appear in *Transformation Groups*.
- 96. Tensor triangular geometry for quantum groups (with B. Boe and J. Kujawa), submitted.
- 97. On BBW parabolics for Lie superalgebras (with D. Grantcharov, N. Grantcharov, and J. Wu), submitted.
- 98. Counterexamples to the Tilting and (p, r)-Filtration Conjectures (with C. Bendel, C. Pillen and P. Sobaje), submitted.
- 99. On q-Schur algebras corresponding to Hecke algebras of type B (with C.J. Lai and Z. Xiang), submitted.

- 100. On torsion-free endotrivial modules for finite groups of Lie type (with J. Carlson, J. Grodal, and N. Mazza), in progress.
- 101. Extensions for generalized loop algebras (with B. Boe, C. Drupieski, T. Macedo), preprint.
- 102. Realizing rings of regular functions through quantum group cohomology (with Z. Lin), preprint.