Alex S. Dugas   Curriculum Vitae

CONTACT
INFORMATION

Dept. of Mathematics
University of the Pacific
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EDUCATION

University of California, Berkeley

  Ph.D. in Mathematics, May 2006

Stanford University

  B.S. in Mathematics with Honors, June 2000

Budapest Semesters in Mathematics, Fall Semester 1998

ACADEMIC
APPOINTMENTS

University of the Pacific:
- Assistant Professor of Mathematics: August 2011 - Present.
- Visiting Assistant Professor of Mathematics: August 2010 - July 2011.

University of Richmond: Adjunct Lecturer of Mathematics: August 2009 - May 2010.

UC Santa Barbara: Visiting Assistant Professor, Dept. of Mathematics: July 2006 - June 2009.

PEER-REVIEWED
PUBLICATIONS

Stable auto-equivalences for local symmetric algebras. J. Algebra 449 (2016), 22-49.

A construction of derived equivalent pairs of symmetric algebras. Proc. Amer. Math. Soc. 143 (2015), no. 6, 2281-2300.

Torsion pairs and simple-minded systems in triangulated categories. Appl. Cat. Structures 23 (2015), 23, 507–526.

Tilting mutation for weakly symmetric algebras and stable equivalence. Algebr. Represent. Theory (2014), 17, 863-884.

Periodicity of d-cluster-tilted algebras. J. Algebra 368 (2012), 40–52.

Exploring teaching and learning using an iTouch mobile device. (co third-author with J. Mayberry, J. Hargis, L. Boles, D. O'Neill, A. Rivera and M. Meler) Active Learning in Higher Education November 2012 13: 203–217.

Resolutions of mesh algebras: periodicity and Calabi-Yau dimensions. Math. Z. 271 (2012), no. 3-4, 1151–1184.

Strongly tilting truncated path algebras. (with B. Huisgen-Zimmermann) Manuscripta Math. 134 (2011), 225–257.

Periodic resolutions and self-injective algebras of finite type. J. Pure Appl. Alg. 214 (2010), 990-1000.

Stable equivalences of graded algebras. (with R. Martínez Villa) J. Algebra 320 (2008), no. 12, 4215–4241.

Truncated path algebras are homologically transparent. (with B. Huisgen-Zimmermann and J. Learned) Models, Modules and Abelian Groups, de Gruyter (2008), 445–461.

A note on stable equivalences of Morita type. (with R. Martínez Villa) J. Pure Appl. Algebra 208 (2007), no. 2, 421-433.

Constructing minimal $\mathcal{P}^{<\infty}$-approximations of simple modules over left serial algebras. J. Algebra 317 (2007) 786-795.

Representation dimension as a relative homological invariant of stable equivalence. Algebr. Represent. Theory 10 (2007), no. 3, 223-240.

Quasi-duo rings and stable range descent. (with T.Y. Lam) J. Pure Appl. Algebra 195 (2005), 243-259.

PREPRINTS AND WORKS IN PREPARATION

Higher preprojective algebras from SL_n fusion. In preparation.

Stable Picard groups of local dihedral algebras. (with Bill Trok) In preparation.

On periodicity in bounded projective resolutions. Preprint (2012) arXiv:1203.2408 [math.RT].

CONFERENCE AND SEMINAR PRESENTATIONS

Stable auto-equivalences for local symmetric algebras. Opening Perspectives in Algebra, Representations, and Topology, May 2015, Barcelona.

Periodicity of d-cluster tilted algebras. Workshop on Representation Theory, Homological Algebra, and Free Resolutions. Mathematical Sciences Research Institute, Berkeley, February 2013.

Mutation of simple-minded systems in a triangulated category. International Conference on Representations of Algebras XV. Bielefeld, August 2012.

Periodic algebras arising as endomorphism rings. Special Session on Representations of Algebras, AMS Sectional Meeting #1069, Iowa City, March 2011.

Dynkin and Euclidean graphs and the A-D-E-classification. University of the Pacific, Math Club Speaker Series, December 2010.

Periodicity properties of self-injective algebras. Plenary Talk, International Conference on Representations of Algebras XIV, Tokyo, August 2010.

Periodic modules and algebras. Special Session on Commutative algebra and representation theory, AMS-SMM Eighth International Meeting, Berkeley, June 2010.

Periodic projective resolutions. Algebra Seminar, University of Nebraska, Lincoln, May 2010.

Tilting symmetric algebras. Special Session on Representations of finite dimenesional algebras, AMS Sectional Meeting #1054 , Riverside, November 2009.

Representation dimension is invariant under stable equivalence. Workshop on Representation Dimension, Universität Bielefeld, May 2008.

Stable equivalence of graded algebras. International Conference on Representations of Algebras XII, Toruń, August 2007.

Stable equivalence of graded algebras. Special Session on Representations of Algebras, AMS Sectional Meeting #1027, Tucson, April 2007.

Relative Gorenstein dimensions and stable equivalence. PIMS/UNAM Algebra Summer School, Banff International Research Station, July 2006.

A note on stable equivalences of Morita type. Special Session on Representation Theory of Algebras, AMS Sectional Meeting #1007, Santa Barbara, April 2005.

Representation dimension, relative homology and stable equivalence. International Conference on Representations of Algebras XI, Patzcuaro, August 2004.

TEACHING
EXPERIENCE

University of the Pacific, Dept. of Mathematics. 30 courses, Fall 2010 - Present:
- *Abstract Algebra (Math 143)*, Fall 2012, Fall 2013.
- *Pre-Calculus (Math 41)*, Fall 2012 (2 sections), Spring 2013.
- *Real Analysis I (Math 155)*, Spring 2012, Spring 2016.
- *Linear Algebra (Math 141)*, Spring 2015.
- *Introduction to Abstract Math (Math 49)*, Fall 2011.
- *Calculus III (Math 55)*, Spring 2015 (2 sections).
- *Calculus II (Math 53)*, Spring 2011 - Fall 2015 (14 sections).
- *Calculus I (Math 51)*, Fall 2010 (2 sections), Spring 2016 (2 sections).
- *Introduction to Finite Math and Calculus (Math 45)*, Fall 2010.

Independent Studies and Seminars:
- *Abstract Algebra 2 Reading Course (Math 191/144)*, Spring 2012 (3 students).
- *Topics in Algebra Reading Course (Math 191)*, Fall 2013 (1 student).
- *Topics in Algebra Reading Course (Math 191)*, Spring 2014 (1 student).
- *Independent Research (Math 197)*, Spring 2014 (1 student)
- *Introduction to Number Theory (Math 191)*, Fall 2015 (1 student).
- *Problem Solving Seminar (Math 95)*, Fall Semesters 2011-2015 (3-5 students per semester).

University of Richmond, Dept. of Math & Comp. Science. 4 courses, Fall 2009 - Spring 2010:
- *Calculus I (Math 211)*, Fall 2009 (2 sections), Spring 2010 (2 sections).

UC Santa Barbara, Dept. of Mathematics. 12 courses, Fall 2006 - Spring 2009.

Upper-division courses:
- *Combinatorial Analysis*, Fall 2008.
- *Introduction to Linear Algebra* Spring 2009, Spring 2008.
- *Advanced Linear Algebra*, Spring 2008.

Lower-division courses:
- *A Transition to Higher Mathematics*, Spring 2009, Winter, Fall 2007.
- *Differential Equations and Linear Algebra II*, Winter 2009.
- *Vector Calculus I*, Fall 2006.
- *Vector Calculus II*, Winter 2007.
- *Calculus with Applications II*, Spring 2007.
- *Calculus for Social and Life Sciences*, Winter 2008.

UC Berkeley, Dept. of Mathematics. Graduate Student Instructor 2001-2006 (10 semesters). Courses included: Precalculus, Calculus, Discrete Mathematics, and Abstract Algebra.

- *Professional Development Program (PDP)*, Fall 2003, Fall 2005, Spring 2006.
  Led intensive discussion sections for students from educationally disadvantaged backgrounds and underrepresented minorities. Additional responsibilities included developing worksheets and organizing group-based activities.

- *Tutor for Pass the Torch and UC LEADS*, Spring 2004.
  Led study groups, tutored and mentored transfer students and UC LEADS scholars in upper-division math classes.

Plenary Speaker. International Conference of Representations of Algebras XIV, Tokyo 2010.

Presidential Postdoctoral Fellowship Finalist: University of California, 2006.

Outstanding Graduate Student Instructor Award: UC Berkeley, 2006.

Robert M. Golden Medal For Excellence in the Humanities and Creative Arts: Stanford Universtiy, 2000. Award given for outstanding Honors Theses.

Honorable Mention: Sixtieth William Lowell Putnam Competition, 1999.

University Committees
- Experiential Learning Opportunities Committee, Spring 2014

College Committees:
- Curriculum Committee, Spring 2015

Departmental Committees:
- Assessment Committee, Fall 2011–Present.
- Calculus Committee, Spring 2011–Spring 2012.

Professional Memberships:
- American Mathematical Society
- Mathematical Association of America
- Pi Mu Epsilon

Mathematical Reviews: I have written reviews of 45 research articles for Mathematical Reviews, since May 2008. These reviews are published in the online database MathSciNet by the American Mathematical Society.

Journal Referee Experience: I have refereed original research articles submitted for publication in the following journals.
- Proceedings of the American Mathematical Society
- Proceedings of the London Mathematical Society
- Journal of Algebra
- Journal of Pure and Applied Algebra
- Algebra and Number Theory
- Communications in Algebra
- Nagoya Mathematical Journal
- Science China Mathematics
- Applied Categorical Structures