Curriculum Vitae

Keith A. Kearnes

Contact Information:

Department of Mathematics
University of Colorado
Boulder, CO 80309-0395

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Research Interests:

Algebra, Combinatorics, Logic

Degrees:

Ph.D., University of California, Berkeley, 1988
Dissertation: *Topics in Algebra: Injective Completeness, Fine Spectra and Relative Presentability,* supervised by Ralph McKenzie

M.S., University of California, Riverside, 1983

B.S., University of California, Riverside, 1982

Professional Experience:

University of Colorado
2007–present Professor
2001–2007 Associate professor
2000–2001 Assistant professor

University of Louisville
1999–2000 Associate professor
1998–1999 Assistant professor

Visiting positions:
University of Szeged, Fulbright Fellow, 2010
University of Hawaii, 2006
University of Louisville, 1997-98
University of Arkansas, 1995-97
Technische Universität Darmstadt, Humbolt Fellow, 1993–95
Harvey Mudd College, 1992–93
Vanderbilt University, 1990–92
University of Hawaii, 1988–90

Awards and Honors:

Research

Fulbright Research Fellowship, 2010 (Hungary)
The Fulbright Program is the flagship international educational exchange program sponsored by the U.S. government.

22nd Annual Shanks Lecturer, 2007
Vanderbilt University's Distinguished Lecture Series in Mathematics.

University Scholar, 2000
University of Louisville's award for outstanding research. One awarded annually in each of the Colleges of Arts & Sciences, Medicine and Music.

Alexander von Humboldt Research Fellowship, 1993–95
German fellowship program for early-stage researchers with doctorates.

Teaching

Outstanding Teacher for Teaching with Technology, 2014
Awarded by ASSETT, the Arts & Sciences Support of Education through Technology, at the University of Colorado.

Distinguished Teaching Award, 1985
U.C. Berkeley's annual award for outstanding teaching by a graduate student.

Service

Colorado Mathematics Award, 2008, 2009, 2010, 2011, 2012, 2013
Colorado governor's award for outstanding service to students. Awarded for coaching students who placed in the top 3 in Colorado in the William Lowell Putnam Mathematical Competition. Co-recipients: A. Gorokhovsky and S. Kuznetsov.

Funding:

NSF Grant no. DMS 1419176, co-PI, *Collaborative Research: Algebra and algorithms, structure and complexity theory*, $515,005, 2014–2017 (pending).

NSF Grant no. DMS 1263229, PI, conference funding for 3 conferences in the BLAST series, $99,036, 2013–2015.

University of Colorado Council on Research and Creative Work, PI, conference funding (Laver Conference), $1,500, 2010.

NSF Grant no. DMS 0931980, PI, conference funding for 3 conferences in the BLAST series, $95,097, 2009–2011.

University of Colorado Council on Research and Creative Work, PI, conference funding (Taylor Conference), $2,000, 2004–05.

Paul Erdös Summer Research Center of Mathematics, co-PI, conference funding, 2,000,000 HUF, 2001.

NSF-OTKA-MTA Research Grant no. DMS 9941276, PI, $27,948, 1999–01.

NSF Research Grant no. DMS 9802922, PI, $61,462, 1998–01.

University of Louisville Project Completion Grant, $3000, 1998.

Editorial Work:

Guest editor-in-chief for:

Order	BLAST 2010 Proceedings, 2010-2012

Member of the editorial board for the journals:

Algebra Universalis	1995–present
International J. of Algebra and Computation	2012–present
Order	2005–present

Reviewer for:

Mathematical Reviews	Reviews of 100 journal articles
Addison-Wesley	Review of one textbook manuscript
Birkhäuser Science	Review of one book proposal
John Wiley & Sons	Review of one laboratory manual manuscript
Prentice Hall	Review of three textbook manuscripts
Springer	Review of one textbook manuscript
World Scientific	Review of one research monograph

Referee for the journals:

Acta Cybernet.
Acta Math. Univ. Comenian.
Acta Sci. Math.
Adv. Math.
Algebra Colloq.
Algebra Universalis
Amer. Math. Monthly
Ann. Pure Appl. Logic
Bull. Iranian Math. Soc.
Comm. Algebra
Discrete Math.
Discuss. Math. Gen. Algebra Appl.
Fund. Math.
J. Austral. Math. Soc.
J. Eur. Math. Soc.
J. Pure Appl. Algebra
J. Pure Appl. Math.
J. Symbolic Logic
Kyungpook Math. J.
Math. Comput. Modelling
Math. Slovaca
Mem. Amer. Math. Soc.
Monatsh. Math.
Order
Period. Math. Hungar.
Proc. Amer. Math. Soc.

Indian J. Pure Appl. Math.
Internat. J. Algebra Comput.
Int. J. Math. Math. Sci.
J. Algebra
J. Algebra and Number Theory Acad.
J. Amer. Math. Soc.
Publ. Math. Debrecen
Rocky Mountain J. Math.
Semigroup Forum
Studia Logica
Topology Appl.
Turkish J. Math.
Trans. Amer. Math. Soc.

Review of Grant Proposals:

Reviewer for:

Austrian Science Fund
Czech Science Foundation
Hungarian National Foundation for Scientific Research
Israel Science Foundation
National Science Foundation
National Security Agency
NSERC - Natural Sciences and Engineering Research Council of Canada
Ryerson University, Office of Research Services
U.S. Civilian Research and Development Foundation

Conference Organization:

Program committee: *BLAST 2014* (Boolean algebra, Lattice theory, Algebraic logic, Set theory, Topology), New Mexico State University, Las Cruces NM, 2014.

Organizing and program committees: *2014 ASL North American Annual Meeting,* University of Colorado, Boulder CO, May 2014.

Program committee: *BLAST 2013* (Boolean algebra, Lattice theory, Algebraic logic, Set theory, Topology), Chapman University, Orange, CA, 2013.

Organizer for: *"Algebras, Lattices and Varieties"*, a special session at the Spring Western Sectional AMS meeting, University of Colorado, Boulder, April 2013.

Program committee: *BLAST 2011* (Boolean algebra, Lattice theory, Algebraic logic, Set theory, Topology), University of Kansas, Lawrence, KS, 2011.

Organizing and program committees: *BLAST 2010* (Boolean algebra, Lattice theory, Algebraic logic, Set theory, Topology), University of Colorado, Boulder, CO, June 2010.

Organizing committee: *MAMLS in Boulder – Conference in Honor of Richard Laver*, (MAMLS = Mid-Atlantic Mathematical Logic Seminar), University of Colorado, Boulder, CO, February 2010.

Program committee: *BLAST 2009* (Boolean algebra, Lattice theory, Algebraic logic, Set theory, Topology), New Mexico State University, Las Cruces, NM, August 2009.

Program committee: *BLAST 2008* (Boolean algebra, Lattice theory, Algebraic logic, Set theory, Topology), University of Denver, Denver, CO, August 2008.

Organizer for: *"Algebras, Lattices and Varieties — A Conference in Honor of Walter Taylor"*, University of Colorado, Boulder, CO, August 2004.

Organizer for: *"Universal Algebra"*, a special session at the 2004 summer meeting of the Association of Symbolic Logic, University of Turin, Torino, Italy, July 2004.

Organizer for: *"Algebras, Lattices and Varieties"*, a special session at the Western–Central AMS meeting, University of Colorado, Boulder, CO, October 2003.

Program committee: *"Universal Algebra and Lattice Theory"*, University of Szeged, Hungary, July 2002.

Organizer for: *"Algebraic Logic and Universal Algebra"*, a special session at the Joint AMS-UMI meeting, University of Pisa, Pisa, Italy, June 2002.

Organizer for: *"A Course in Tame Congruence Theory"*, Mathematics Institute of the Hungarian Academy of Sciences, Budapest, Hungary, July 2001.

Organizer for: *"The 1999 Louisville–Vanderbilt Algebra Workshop"*, Vanderbilt University, Nashville, TN, July 1999.

Organizer for: *"Modes, Modals, Related Structures, and Their Applications"*, Stefan Banach International Mathematical Center, Warsaw, Poland, March 1997.

Graduate Students:

Gena Boercker, University of Louisville, M.S. 2000
Thesis: *Irreducible sets in the Post varieties*

Leanne Conaway, University of Louisville, M.S. 2000
Thesis: *Minimal sets in finite rings*

Matthew Nickodemus, University of Colorado, Ph.D. 2007
Thesis: *Natural dualities for finite groups with abelian Sylow subgroups*

Yingwei Li, University of Colorado, M.A. 2010
Thesis: *N-bounded varieties*

Young Jo Kwak, University of Colorado, M.A. 2003, Ph.D. 2010
Thesis: *Automorphisms of some combinatorially defined Lie algebras over $GF(2)$*

Joshua Wiscons, University of Colorado, Ph.D. 2011
Thesis: *Moufang sets of finite Morley rank*

Matthew Moore, University of Colorado, M.A. 2010, Ph.D. 2013
Thesis: *The undecidability of the definability of principal subcongruences*

Jason Hill, University of Colorado, M.A. 2010, Ph.D. 2014 (expected)

Andrew Moorhead, University of Colorado, M.A. 2011, Ph.D. (in progress)

Degree and Thesis Committees:

G. Boercker, Department of Mathematics, University of Louisville, M.S. Exam Committee, 2000 (advisor)

L. Conaway, Department of Mathematics, University of Louisville, M.S. Exam Committee, 2000 (advisor)

M. Jenner, Department of Mathematics, University of Cape Town, M.S. Exam Commitee, 2000

S. Miller, Department of Mathematics, University of Colorado, M.A. Exam Committee, 2002

A. Mann, Department of Mathematics, University of Colorado, M.A. Exam Committee, 2003

T. Srinivasa Rao, Department of Mathematics, Nagarjuna University, India, Ph.D. Dissertation Committee, 2003

J. Horne, Department of Mathematics, University of Colorado, Ph.D. Qualifying Exam, 2003

Y. J. Kwak, Department of Mathematics, University of Colorado, M.A. Exam Committee, 2003 (advisor)

S. Miller, Department of Mathematics, University of Colorado, Ph.D. Qualifying Exam, 2005

A. Mann, Department of Mathematics, University of Colorado, Ph.D. Qualifying Exam, 2005

M. Nickodemus, Department of Mathematics, University of Colorado, Ph.D. Qualifying Exam, 2005 (advisor)

Y. J. Kwak, Department of Mathematics, University of Colorado, Ph.D. Qualifying Exam, 2005 (advisor)

C. Bruns, Department of Mathematics, University of Colorado, Ph.D. Qualifying Exam, 2005

H. Denoncourt, Department of Mathematics, University of Colorado, Ph.D. Qualifying Exam, 2005

J. Horne, Department of Mathematics, University of Colorado, Ph.D. Dissertation Committee, 2005

D. Champion, Department of Mathematics, University of Colorado, M.A. Exam Committee, 2005

J. Shaw, Department of Mathematics, University of Colorado, Ph.D. Qualifying Exam, 2006

C. Reichenbach, Department of Computer Science, University of Colorado, Ph.D. Qualifying Exam, 2006

T. Dent, Department of Mathematics, University of Colorado, Ph.D. Qualifying Exam, 2007

J. Wiscons, Department of Mathematics, University of Colorado, Ph.D. Qualifying Exam, 2007 (advisor)

A. Mann, Department of Mathematics, University of Colorado, Ph.D. Dissertation Committee, 2007 (2nd reader)

S. Miller, Department of Mathematics, University of Colorado, Ph.D. Dissertation Committee, 2007

M. Nickodemus, Department of Mathematics, University of Colorado, Ph.D. Dissertation Committee, 2007 (advisor)

J. Pytell, Department of Psychology, University of Colorado, Honors Thesis Committee, 2008

C. Bruns, Department of Mathematics, University of Colorado, Ph.D. Dissertation Committee, 2008

J. Shaw, Department of Mathematics, University of Colorado, Ph.D. Dissertation Committee, 2008

J. Sanders, Department of Mathematics, University of Colorado, Ph.D. Qualifying Exam, 2008 (advisor)

S. Unger, Department of Mathematics, University of Colorado, M.A. Exam Committee, 2008

H. Denoncourt, Department of Mathematics, University of Colorado, Ph.D. Dissertation Committee, 2008

D. McCarl, Department of Mathematics, University of Colorado, M.A. Exam Committee, 2008

R. Chestnut, Department of Mathematics, University of Colorado, Ph.D. Qualifying Exam, 2009

R. Dodson, Department of Mathematics, University of Colorado, M.A. Exam Committee, 2009

M. Behrisch, Fachrichtung Mathematik, Institut für Algebra, Technische Universität Dresden, M.S. Referee, 2009

J. Hill, Department of Mathematics, University of Colorado, Ph.D. Qualifying Exam, 2010 (advisor)

M. Moore, Department of Mathematics, University of Colorado, Ph.D. Qualifying Exam, 2010 (advisor)

Y. Li, Department of Mathematics, University of Colorado, M.A. Exam Committee, 2010 (advisor)

K. Selker, Department of Mathematics, University of Colorado, Ph.D. Qualifying Exam, 2010

Y. J. Kwak, Department of Mathematics, University of Colorado, Ph.D. Dissertation Committee, 2010 (advisor)

T. Dent, Department of Mathematics, University of Colorado, Ph.D. Dissertation Committee, 2011 (2nd reader)

J. Wiscons, Department of Mathematics, University of Colorado, Ph.D. Dissertation Committee, 2011 (advisor)

A. Moorhead, Department of Mathematics, University of Colorado, Ph.D. Qualifying Exam, 2011 (advisor)

K. Vanyi, Department of Mathematics, University of Colorado, M.A. Exam Committee, 2011

C. Scherer, Department of Mathematics, University of Colorado, Ph.D. Qualifying Exam, 2011

F. Schneider, Fachrichtung Mathematik, Institut für Algebra, Technische Universität Dresden, M.S. Referee, 2011
R. Chestnut, Department of Mathematics, University of Colorado, Ph.D. Dissertation Committee, 2012 (2nd reader)
C. Bridges, Department of Mathematics, University of Colorado, M.A. Exam Committee, 2012
B. Abbe, Department of Mathematics, University of Colorado, M.A. Exam Committee, 2012
F. Schneider, Fachrichtung Mathematik, Institut für Algebra, Technische Universität Dresden, Ph.D. Dissertation Committee, 2012 (2nd reader)
M. Hartman, Department of Mathematics, University of Colorado, M.A. Exam Committee, 2012
J. Linman, Department of Mathematics, University of Colorado, Ph.D. Qualifying Exam, 2013
C. Bridges, Department of Mathematics, University of Colorado, Ph.D. Qualifying Exam, 2013
M. Moore, Department of Mathematics, University of Colorado, Ph.D. Dissertation Committee, 2013 (advisor)
P. Mayr, Institute for Algebra, Johannes Kepler University, Linz, Austria, Habilitation committee, 2013

Course Development:

Developed: Honors Linear Algebra. First ran in Spring 2014.

Proposed and Developed: Homological Algebra. First ran as a topics course in Spring 2010.

Proposed and Developed Math 6250: Theory of Rings. First ran in Spring 2005.

Proposed and Developed Math 6270: Theory of Groups. First ran in Fall 2005.

Service:

University of Louisville: (1998–2000)

Assistant Professor Search Committee, 1998–1999 & 1999–2000.
Department Chair Search Committee, 1999–2000.
Departmental Liaison to the Kersey Research Library, 1998–2000.
Department Colloquium Chair, 1998–2000.
Louisville Algebra Seminar, organizer, 1998–2000.
Louisville–Vanderbilt Algebra Seminar, organizer, 1998–2000.

University of Colorado: (2000–present)

University Level:

Fulbright Evaluation Panel, 2011.
Arts and Sciences Council, 2008–2011.
Arts and Sciences Personnel Committee, 2008–2010.

Department Level:

Putnam Competition Coach, 2007–present.
Problem of the Month Organizer, 2001–present.
Logic Seminar Organizer, 2000–present.
Preliminary Examination Committee, many times during 2000–present.
Primary Unit Evaluation Committee (Dr. Muir), chair, 2013.
Undergraduate Committee, 2007–2009, 2011–2013.
Constitution Committee, 2011–2012.
Hiring Committees, 2006-07, 2007-08, 2008-09.
Primary Unit Evaluation Committee (Dr. Ih), chair, 2008.
Calculus 2 Czar, Fall 2006.
Colloquium Chair, 2000–2003.
Delong Lecture Series Chair, 2000–2003.
Graduate Committee, 2000–2002.

Community Level:

Corden Pharma Colorado Regional Science Fair (formerly Roche Colorado), judge, 2004, 2005, 2009, 2010, 2012, 2013.

Publications:

Authors are listed in alphabetical order. Student coauthors are underlined.

Research Monograph:

1. K. A. Kearnes, and E. W. Kiss, *The Shape of Congruence Lattices*, Mem. Amer. Math. Soc. **222** (2013), no. 1046, viii+169 pp.

Peer Reviewed Research Papers:

1. K. A. Kearnes, *On the relationship between* AP*,* RS *and* CEP, Proc. Amer. Math. Soc. **105** (1989), no. 4, 827–839.
2. K. A. Kearnes, *Atomicity and nilpotence*, Canad. J. Math. **42** (1990), no. 2, 1–18.
3. K. A. Kearnes, *Relatively congruence distributive subquasivarieties of a congruence modular variety*, Bull. Austral. Math. Soc. **41** (1990), no. 1, 87–96.
4. K. A. Kearnes, *Congruence lower semimodularity and 2-finiteness imply congruence modularity*, Algebra Universalis **28** (1991), no. 1, 1–11.
5. K. A. Kearnes, *Residual bounds for varieties of modules*, Algebra Universalis **28** (1991), no. 3, 448–452.
6. K. A. Kearnes, *Finite algebras that generate an injectively complete variety*, Bull. Austral. Math. Soc. **44** (1991), no. 2, 303–324.
7. K. A. Kearnes, *Type preservation in locally finite varieties with the* CEP, Canad. J. Math. **43** (1991), no. 4, 748–769.
8. K. A. Kearnes and R. McKenzie, *Commutator theory for relatively modular quasivarieties,* Trans. Amer. Math. Soc. **331** (1992), no. 2, 465–502.
9. K. A. Kearnes, *Congruence permutable and congruence 3-permutable locally finite varieties*, J. Algebra **156** (1993), no. 1, 36–49.
10. K. A. Kearnes, *An order–theoretic property of the commutator*, Internat. J. Algebra Comput. **3** (1993), no. 4, 491–533.
11. K. A. Kearnes, *Natural examples of quasivarieties with EDPM*, Algebra Universalis **30** (1993), no. 4, 598–600.
12. P. Agliano and K. A. Kearnes, *Congruence semimodular varieties I: locally finite varieties,* Algebra Universalis **32** (1994), no. 2, 224–269.
13. P. Agliano and K. A. Kearnes, *Congruence semimodular varieties II: regular varieties,* Algebra Universalis **32** (1994), no. 2, 270–296.
14. K. A. Kearnes and R. Willard, *Inherently nonfinitely based solvable algebras*, Canad. Math. Bull. **37** (1994), no. 4, 514-521.
15. R. Freese, K. A. Kearnes and J. B. Nation, *Congruence lattices of congruence semidistributive algebras*, in *Lattice Theory and its Applications* (Darmstadt, 1991), 63–78, Res. Exp. Math. **23**, Heldermann, Lemgo, 1995.
16. K. A. Kearnes, *Every nearly idempotent plain algebra generates a minimal variety*, Algebra Universalis **34** (1995), no. 2, 322–325.
17. K. A. Kearnes, *Semilattice modes, I: the associated semiring*, Algebra Universalis **34** (1995), no. 2, 220–272.

18. K. A. Kearnes, *Semilattice modes, II: the amalgamation property*, Algebra Universalis **34** (1995), no. 2, 273–303.
19. K. A. Kearnes, *A quasi–affine representation*, Internat. J. Algebra Comput. **5** (1995), no. 6, 673–702.
20. K. A. Kearnes, *Minimal clones with abelian representations*, Acta Sci. Math. **61** (1995), no. 1-4, 59–76.
21. K. A. Kearnes, *Varieties with a difference term*, J. Algebra **177** (1995), no. 3, 926–960.
22. K. A. Kearnes, *Idempotent simple algebras*, in *Logic and Algebra* (Pontignano, 1994), 529–572, Lecture Notes in Pure and Appl. Math. **180**, 1996.
23. K. A. Kearnes, *Cardinality bounds for subdirectly irreducible algebras*, J. Pure Appl. Algebra **112** (1996), no. 3, 293–312.
24. K. A. Kearnes, *Locally solvable factors of varieties*, Proc. Amer. Math. Soc. **124** (1996), no. 12, 3619–3625.
25. K. A. Kearnes and F. Vogt, *Bialgebraic contexts from dualities*, J. Austral. Math. Soc. **60** (1996), no. 3, 389–404.
26. K. A. Kearnes, *Critical algebras and the Frattini congruence, II*, Bull. Austral. Math. Soc. **53** (1996), no. 1, 91–100.
27. K. A. Kearnes, *A Hamiltonian property for nilpotent algebras*, Algebra Universalis **37** (1997), no. 4, 403–421.
28. K. A. Kearnes and Á. Szendrei, *A characterization of minimal, locally finite varieties*, Trans. Amer. Math. Soc. **349** (1997), no. 5, 1749–1768.
29. K. A. Kearnes, *The class of prime semilattices is not finitely axiomatizable*, Semigroup Forum **55** (1997), no. 1, 133–134.
30. K. A. Kearnes and Á. Szendrei, *Self-rectangulating varieties of type* **5**, Internat. J. Algebra Comput. **7** (1997), no. 4, 511–540.
31. B. Csákány and K. A. Kearnes, *Algebras whose subalgebras and reducts are trivial*, Acta Sci. Math. **63** (1997), no. 3-4, 377–379.
32. K. A. Kearnes, E. W. Kiss and M. Valeriote, *Minimal sets and varieties*, Trans. Amer. Math. Soc. **350** (1998), no. 1, 1–41.
33. K. A. Kearnes and Á. Szendrei, *The relationship between two commutators*, Internat. J. Algebra Comput. **8** (1998), no. 4, 497–531.
34. K. A. Kearnes and Á. Szendrei, *Projectivity and isomorphism of strictly simple algebras*, Algebra Universalis **39** (1998), no. 1-2, 45–56.
35. K. A. Kearnes and E. W. Kiss, *Modularity prevents tails*, Proc. Amer. Math. Soc. **127** (1999), no. 1, 11–19.
36. K. A. Kearnes and R. Willard, *Finiteness properties of locally finite abelian varieties*, Internat. J. Algebra Comput. **9** (1999), no. 2, 157–168.
37. K. A. Kearnes, E. W. Kiss and M. Valeriote, *A geometric consequence of residual smallness*, Ann. Pure Appl. Logic **99** (1999), no. 1-3, 137–169.
38. K. A. Kearnes and E. W. Kiss, *Finite algebras of finite complexity*, Discrete Math. **207** (1999), no. 1-3, 89–135.
39. K. A. Kearnes and R. Willard, *Residually finite congruence meet semidistributive varieties of finite type have a finite residual bound*, Proc. Amer. Math. Soc. **127**

(1999), no. 10, 2841–2850.

40. K. A. Kearnes, *Subdirectly irreducible modes*, Discuss. Math. Algebra Stochastic Methods. **19** (1999), no. 1, 129–145.

41. K. A. Kearnes and Á. Szendrei, *The classification of commutative minimal clones*, Discuss. Math. Algebra Stochastic Methods **19** (1999), no. 1, 147–178.

42. K. A. Kearnes and M. Valeriote, *A modification of Polin's variety*, Algebra Universalis **41** (1999), no. 3, 229–231.

43. K. A. Kearnes and Á. Szendrei, *The residual character of strictly simple term minimal algebras*, Algebra Universalis **42** (1999), no. 4, 269–292.

44. K. A. Kearnes, *Congruence modular varieties with small free spectra*, Algebra Universalis **42** (1999), no. 3, 165–181.

45. K. A. Kearnes, *A characterization of locally finite varieties that satisfy a nontrivial congruence identity*, Algebra Universalis **42** (1999), no. 3, 195–204.

46. K. A. Kearnes, *Categorical quasivarieties via Morita equivalence*, J. Symbolic Logic **65** (2000), no. 2, 839–856.

47. K. A. Kearnes, *Almost all minimal idempotent varieties are congruence modular*, Algebra Universalis **44** (2000), no. 1-2, 39–45.

48. K. A. Kearnes and Á. Szendrei, *Collapsing permutation groups*, Algebra Universalis **45** (2001), no. 1, 35–51.

49. G. Czédli, R. Halaš, K. A. Kearnes, P. P. Pálfy, and Á. Szendrei, *The join of two minimal clones and the meet of two maximal clones*, Algebra Universalis **45** (2001), no. 2-3, 161–178.

50. K. A. Kearnes and E. W. Kiss, *Left and right nilpotence degree are independent*, Contributions to General Algebra **13**, Verlag Johannes Heyn, Klagenfurt, 2000.

51. K. A. Kearnes, Á. Szendrei and J. Wood, *Generating singular transformations*, Semigroup Forum **63** (2001), no. 3, 441–448.

52. K. A. Kearnes, *Congruence join semidistributivity is equivalent to a congruence identity*, Algebra Universalis **46** (2001), no. 3, 373–387.

53. K. A. Kearnes, E. W. Kiss, Á. Szendrei, and R. Willard, *Chief factor sizes in finitely generated varieties*, Canad. J. Math. **54** (2002), no. 4, 736–756.

54. K. A. Kearnes and L. Sequeira, *Hausdorff properties of topological algebras*, Algebra Universalis **47** (2002), no. 4, 343–366.

55. K. A. Kearnes and E. W. Kiss, *Residual smallness and weak centrality*, Internat. J. Algebra Comput. **13** (2003), no. 1, 35–59.

56. L. Conaway, and K. A. Kearnes, *Minimal sets in finite rings*, Algebra Universalis **51** (2004), no. 1, 81–109.

57. K. A. Kearnes and Á. Szendrei, *Groups with identical subgroup lattices in all powers*, J. Group Theory **7** (2004), no. 3, 385–402.

58. K. A. Kearnes and Á. Szendrei, *Clones of finite groups*, Algebra Universalis **54** (2005), no. 1, 23–52.

59. K. A. Kearnes, *Congruence lattices of locally finite algebras*, Algebra Universalis **54** (2005), no. 2, 237–248.

60. K. A. Kearnes and E. W. Kiss, *The triangular principle is equivalent to the triangular scheme*, Algebra Universalis **54** (2005), no. 3, 273–283.

61. K. A. Kearnes, *Quasivarieties of modules over path algebras of quivers*, Studia Logica **83** (2006), 333–349.

62. K. A. Kearnes and A. W. Marczak, *p_n-sequences of algebras with one fundamental operation*, Algebra Universalis **56** (2007), no. 1, 69–75.

63. K. A. Kearnes and S. T. Tschantz, *Automorphism groups of squares and of free algebras*, Internat. J. Algebra Comput. **17** (2007), no. 3, 461–505.

64. K. A. Kearnes and Á. Szendrei, *Clones closed under conjugation. I. Clones with constants.* Internat. J. Algebra Comput. **18** (2008), no. 1, 7–58.

65. K. A. Kearnes and J. B. Nation, *Axiomatizable and nonaxiomatizable congruence prevarieties*, Algebra Universalis **59** (2008), 323–335.

66. K. A. Kearnes, J. Shaw, and Á. Szendrei, *Clones of 2-step nilpotent groups*, Algebra Universalis **59** (2008), 491–512.

67. P. Idziak, K. A. Kearnes, E. W. Kiss and M. Valeriote, *Definable principal congruences and solvability*, Ann. Pure and Appl. Logic **157** (2009), 30–49.

68. K. A. Kearnes, *On the functional completeness of simple tournaments*, Algebra Universalis **61** (2009), 475–478.

69. K. A. Kearnes *An axiomatic formation that is not a variety*, J. Group Theory **13** (2010), no. 2, 233–241.

70. K. A. Kearnes and Y. J. Kwak, *Residually finite varieties of nonassociative algebras*, Comm. Algebra **38** (2010), no. 8, 3705–3727.

71. K. A. Kearnes and G. Oman, *Cardinalities of residue fields of Noetherian integral domains*, Comm. Algebra **38** (2010), no. 8, 3580–3588.

72. K. A. Kearnes and Á. Szendrei, *Clones of algebras with parallelogram terms* Internat. J. Algebra Comput. **22** (2012), no. 1, 1250005, 30 pp.

73. M. Behrisch, M. Couceiro, K. A. Kearnes, E. Lehtonen and Á. Szendrei, *Commuting polynomial operations of distributive lattices*, Order **29** (2012), no. 2, 245–269.

74. T. Dent, K. A. Kearnes and Á. Szendrei, *An easy test for congruence modularity*, Algebra Universalis **67** (2012), no. 4, 375–392.

75. K. A. Kearnes and G. Oman, *Jónsson posets and Jónsson unary algebras*, Algebra Universalis **69** (2013), no. 2, 101–112.

76. G. Grasegger, G. Horváth and K. A. Kearnes, *Polynomial equivalence of finite rings*, J. Aust. Math. Soc. FirstView 12 (2013), 1–14.

Papers Accepted or Submitted for Publication:

77. K. A. Kearnes, P. Marković, and R. N. McKenzie, *Optimal strong Mal'cev conditions for omitting type* **1** *in locally finite varieties*, to appear in Algebra Universalis.

78. K. A. Kearnes and Y. Li, *Finitely generated varieties with small $\langle R, S\rangle$-irreducible sets*, submitted.

79. K. A. Kearnes, Á. Szendrei and R. Willard, *A finite basis theorem for difference-term varieties with a finite residual bound*, submitted.

80. K. A. Kearnes, E. W. Kiss and Á. Szendrei, *Growth rates of algebras I: pointed cube terms*, submitted.

81. K. A. Kearnes, E. W. Kiss and Á. Szendrei, *Growth rates of algebras II: Wiegold dichotomy*, submitted.
82. K. A. Kearnes, E. W. Kiss and Á. Szendrei, *Growth rates of algebras III: finite solvable algebras*, submitted.
83. K. A. Kearnes, *Extending UFDs to PIDs without adding units*, submitted.

Manuscripts, Papers in Progress:

84. K. A. Kearnes, *Residual smallness relativized to types, II*, unpublished manuscript.
85. K. A. Kearnes and O. Lewis, *Categorical equivalences between pseudovarieties*, unpublished manuscript.
86. J. Berman, K. A. Kearnes and Á. Szendrei, *Free spectra of intermediate growth*, unpublished manuscript.
87. K. A. Kearnes and Á. Szendrei, *Dualizable algebras with parallelogram terms*, unpublished manuscript.

Conference Proceedings Edited:

1. A. Andretta, K. A. Kearnes and D. Zambella, eds., *Logic Colloquium 2004*, Proceedings of the Annual Summer Meeting of the Association for Symbolic Logic, held in Torino, Italy, July 25–31, 2004. Lecture Notes in Logic, **29**. Association for Symbolic Logic, Cambridge University Press, 2008. x+236 pp.
2. J. Harding, B. Kastermans, K. A. Kearnes, J. D. Monk, and Á. Szendrei, eds., *BLAST 2010*, Proceedings of the 3rd International Conference on Boolean Algebra, Lattice Theory, Universal Algebra, Set Theory and Set-Theoretical Topology, held in Boulder, CO, June 2–6, 2010. Order **29**, no. 2, 2012.

Other Publications:

1. K. A. Kearnes, E. W. Kiss, and Á. Szendrei, *Gauss-Egészek és Dirichlet Tétele I*, KöMal (Mathematics and Physics Journal for Secondary Schools), March 2010.
2. K. A. Kearnes, E. W. Kiss, and Á. Szendrei, *Gauss-Egészek és Dirichlet Tétele II*, KöMal (Mathematics and Physics Journal for Secondary Schools), April 2010.

Talks: (Invited talks denoted by ^{i}, Plenary talks denoted by ^{p}.)

1. *On the Relationship Between* AP*,* RS *and* CEP, Workshop on Tame Congruence Theory and Commutator Theory, Eötvös University, Hungary, August 1988.

2. *Injectively Complete Varieties*, Conference on Universal Algebra, Karlovy Vary, Czechoslovakia, August 1988.

3.^{i} *Finite Bases for Quasivarieties*, Colloquium, University of Hawaii, Honolulu, HI, March 1989.

4.^{p} *Commutator Theory for Relatively Modular Quasivarieties*, Conference on Universal Algebra and Lattice Theory, University of Szeged, Hungary, August 1989.

5.^{p} *Congruence Semimodular Varieties*, Jónsson Symposium, Laugervatn, Iceland, July 1990.

6.^{i} *Transfer Principles*, Conference on Decidable Varieties, University of Waterloo, Ontario, Canada, June 1991.

7. *Order–Theoretic Properties of the Commutator*, Alan Day Conference, McMaster University, Ontario, Canada, August 1992.

8.^{i} *Minimal Varieties of Algebras*, Colloquium, UCLA, Los Angeles, CA, February 1993.

9.^{i} *Choosing Coordinates in Algebra*, Colloquium, Claremont Colleges, Claremont, CA, April 1993.

10.^{p} *Commutator Theory*, Conference on Universal Algebra and Category Theory, Mathematical Sciences Research Institute, Berkeley, CA, June 1993.

11.^{i} *The RS Conjecture*, Colloquium, Technische Universität, Darmstadt, Germany, September 1993.

12.^{p} (Invited Series of Five Lectures), Workshop on Modes and Modal Theory, Instytut Politechnika Warszawska, Poland, December 1993.

13.^{p} *Affinization in Varieties and Quasivarieties*, 47th Arbeitstagung Allgemeine Algebra, University of Kaiserslautern, Germany, February 1994.

14.^{i} *Solvable Varieties of Algebras*, Mathematical Research Institute of the Hungarian Academy of Sciences, Hungary, February 1994.

15.^{i} *Minimal Varieties*, International Conference on Logic and Algebra, University of Siena, Siena, Italy, April 1994.

16.^{i} *Wielandt's Theorem and Minimal Varieties*, Colloquium, Technische Universität, Darmstadt, Germany, June 1994.

17.^{i} *A Lattice–Theoretic Approach to Commutator Theory*, Colloquium, University of Trieste, Trieste, Italy, September 1994.

18.^{i} *Idempotent Simple Algebras*, Colloquium, Technische Universität, Darmstadt, Germany, January 1995.

19.^{i} *Minimal Varieties of Algebras*, Colloquium, Vanderbilt University, February 1995.

20.^{i} *A General Commutator Theory*, Colloquium, University of Chicago, March 1995.

21.^{i} A Description of $\aleph_0$-Categorical Quasivarieties, Colloquium, McMaster University, Hamilton, April 1995.

22.^{i} *The RS Conjecture*, Colloquium, University of Arkansas, Arkansas, April 1995.

23. *Categorical Quasivarieties via Morita Equivalence*, McLogic 1995, McGill University, Montreal, May 1995.

24.^{p} *Categorical Quasivarieties via Morita Equivalence*, 50th Arbeitstagung Allgemeine Algebra, Technische Hochschule, Darmstadt, Germany, June 1995.

25.^{i} *The Structure of Abelian Algebras*, Colloquium, University of Arkansas, Arkansas, October 1995.

26.^{i} *Minimal Abelian Varieties*, Colloquium, University of Louisville, Kentucky, October 1995.

27.^{i} *The Classification of Minimal Varieties*, Colloquium, Iowa State University, Iowa, October 1995.

28.^{i} *Equationally Complete Abelian Algebras*, Colloquium, University of South Carolina, South Carolina, April 1996.

29.^{p} *Local Methods in Universal Algebra*, Conference on Modern Algebra and its Applications, Vanderbilt University, Tennessee, May 1996.

30.^{p} *Abelian Algebras and Varieties*, Conference on Universal Algebra and Lattice Theory, University of Szeged, Hungary, July 1996.

31.^{i} *Equationally Complete Algebras*, Colloquium, Emory University, Georgia, February 1997.

32.^{i} *Minimal Varieties of Abelian Algebras*, Colloquium, Bowling Green State University, Ohio, March 1997.

33.^{i} *Local Methods in Algebra*, Colloquium, University of Arkansas, Arkansas, March 1997.

34.^{p} *The Structure of Finite of Modes*, Modes, Modals, Related Structures, and Their Applications, Banach Center, Warsaw, Poland, March 1997.

35.^{i} *Residually Small Varieties of Algebras*, Colloquium, North Dakota State University, April 1997.

36.^{p} *Term Conditions*, 55th Arbeitstagung Allgemeine Algebra, Technische Universität, Darmstadt, Germany, November 1997.

37. *The Classification of Commutative Minimal Clones*, AMS Spring Southeastern Sectional Meeting, University of Louisville, March 1998.

38. (A Series of Three Lectures), Louisville-Vanderbilt Algebra Workshop, Vanderbilt University, July 1999.

39. *The Framework for Localization*, Thomasina Coverly Memorial Conference on Universal Algebra and Ordered Sets, Vanderbilt University, May 2000.

40.^{i} *Rectangulation: A New Centrality Concept*, AMS Spring Southeastern Sectional Meeting, University of South Carolina, March 2001.

41.^{p} (An Invited Series of Four Lectures), A Course in Tame Congruence Theory, Mathematical Research Institute of the Hungarian Academy of Sciences, Hungary, July 2001.

42.^{p} *Tame Congruences: Theory and Application*, Conference on Modern Algebra and its Applications, Vanderbilt University, May 2002.

43. *Hausdorff Properties of Topological Algebras*, Universal Algebra and Lattice Theory, University of Szeged, Hungary, July 2002.

44.^{p} *Free Spectra*, 2002 European Discrete Mathematics Symposium, European Mathematical Society, University of Dresden, Germany, October 2002.

45.^{p} *Maltsev Conditions, Term Conditions, and the Shape of Congruence Lattices*, Lattices, Universal Algebra and Applications, University of Lisbon, Portugal, May 2003.

46. *A Theory of Solvability*, Annual Meeting of the Association of Symbolic Logic University of Illinois, Chicago, June 2003.

47.^{i} *The Number of* $\mathrm{Aut}(D)$*-Orbits of a Division Ring* D, Mathematical Research Institute of the Hungarian Academy of Sciences, Hungary, June 2003.

48.^{p} *The Shape of Congruence Lattices*, Novi Sad Algebraic Conference (NSAC '03), University of Novi Sad, Serbia and Montenegro, August 2003.

49.^{p} *Which Groups Arise as* $\mathrm{Aut}(\mathbf{A}^2)$*?*, 68th Arbeitstagung Allgemeine Algebra, University of Dresden, Germany, June 2004.

50.^{p} *Abelian Relatively Modular Quasivarieties*, Universal Algebra and Lattice Theory, University of Szeged, Hungary, July 2005.

51.^{p} *Free Spectra*, Novi Sad Algebraic Conference (NSAC '05), Novi Sad, Serbia and Montenegro, July, 2005.

52.^{i} *Automorphism Groups of Squares of Finite Algebras*, Colloquium, University of Hawaii, April 2006.

53.^{i} (An Invited Series of Three Lectures), Center for Algebra of the University of Lisbon (CAUL), Portugal, June 2006.

54.^{p} (An Invited Series of Two Lectures), Shank's Lecture Series, Vanderbilt University, June 2007.

55. *Residually Finite Varieties*, 76th Arbeitstagung Allgemeine Algebra, Kepler University, Linz, Austria, May 2008.

55.^{i} *Clones of Groups*, Clone Theory and Discrete Mathematics, RIMS (Reseach Institute for Mathematical Sciences), Kyoto University, Kyoto, Japan, July 2008.

56.^{i} *Residually Finite Varieties*, 2009 Spring Central Sectional Meeting of the AMS, Urbana, IL, March 27-29, 2009.

57.^{p} *Free Spectra of Intermediate Growth*, Novi Sad Algebraic Conference (NSAC '09), Novi Sad, Serbia and Montenegro, August, 2009.

58.^{i} *Locally finite varieties with* $\langle R, S\rangle$*-irreducible sets of bounded size*, Bolyai Institute of Mathematics, Szeged, Hungary, October, 2010.

59.^{i} *Locally finite varieties with* $\langle R, S\rangle$*-irreducible sets of bounded size*, Alfréd Rényi Institute of Mathematics, Hungarian Academy of Sciences, Budapest, Hungary, November, 2010.

60. *Locally finite varieties with* $\langle R, S\rangle$*-irreducible sets of bounded size*, 2011 Spring Central Sectional Meeting of the AMS, Iowa City, IA, March 18-20, 2011.

61.^{p} *Growth rates of finite algebras*, Second International Conference on Order, Algebra and Logics, Krakow, Poland, June 6-10, 2011.

62. *Posets with small principal ideals and large principal filters*, 2012 Spring Western Section Meeting of the AMS, University of Hawaii at Manoa, Honolulu, HI March 3-4, 2012.

63.^{p} *Dualizable algebras in congruence modular varieties*, 84th Arbeitstagung Allgemeine Algebra, University of Dresden, Germany, June 7-10, 2012.

64.^{i} *Growth rates of finite solvable algebras*, Vanderbilt University, March 27, 2013

65.^{p} *Finitely based finite algebras*, 4th Novi Sad Algebraic Conference, University of Novi Sad, Serbia, June 5-9, 2013

66.^{p} *Finitely based finite algebras*, Kangro-100, Methods of Analysis and Algebra, International Conference dedicated to the Centennial of Professor Gunnar Kangro, University of Tartu, Estonia, September 1-6, 2013

67.^{i} *Residually finite varieties*, AMS Fall Southeastern Sectional Meeting, University of Louisville, October 2013.

68.^{i} *Finitely based algebras*, Colloquium, University of Waterloo, January 2014.

69.^{i} *Finitely based algebras*, Colloquium, Vanderbilt University, February 2014.

70.^{p} *TBA*, Algebras & Clones, Charles University, Prague, June 2014.