Revised August 2014

DAVID EISENBUD

VITA

Born April 8, 1947, New York City
US Citizen
Married, with two children

EDUCATION

B. S. University of Chicago 1966
M. S. University of Chicago 1967
Ph. D. University of Chicago 1970

Advisors: Saunders MacLane, J. C. Robson
Thesis: Torsion Modules over Dedekind Prime Rings

POSITIONS HELD

Lecturer, Brandeis University 1970–72
Assistant Professor, Brandeis University 1972–73
Sloan Foundation Fellow 1973–75
Visiting scholar, Harvard University 1973–74
Fellow, I. H. E. S. (Bures-Sur-Yvette) 1974–75
Associate Professor, Brandeis University 1976–80
Visiting Researcher, University of Bonn (SFB 40) 1979–80
Professor, Brandeis University 1980–1998
Research Professor, Mathematical Sciences Research Institute, Berkeley 1986–87
Visiting Professor, Harvard University 1987–88 and Fall 1994
Chercheur Associé à l'Institut Henri Poincaré (CNRS), Paris, Spring 1995.
Professor, University of California at Berkeley, 1997–
Director, Mathematical Sciences Research Institute, 1997– 2007
Director for Mathematics and the Physical Sciences, Simons Foundation, 2010–2012

HONORS, PRIZES

Elected Fellow of the American Academy of Arts and Sciences, 2006
Leroy P. Steele Prize for Exposition, American Mathematical Society, 2010

CURRENT RESEARCH INTERESTS

Algebraic Geometry
Commutative Algebra
Computational Methods

OTHER LONG-TERM MATHEMATICAL INTERESTS

- Noncommutative Rings
- Singularity Theory
- Knot Theory and Topology

Professional Activities

American Mathematical Society

Council
1978–1982 (as member of the editorial board of PAMS)
1983–1985 (as member at large)
1998–1999 (as managing editor of BAMS)
Committee to award the AMS Postdoctoral Fellowships 1988–1990
Committee On Professional Ethics 1994–1995
Executive Committee of the Council 2000–2003
Vice President 2000–2003
President-Elect 2002-03
President 2003–2005
Founder and Chair of the annual Current Events Bulletin Special Sessions at the Joint Mathematical Meetings, January 2003–
Immediate Past President 2005–2006
Co-founder and Chair of the Mathematics Research Communities Program, 2008–

Advisory Committees and National Committees

NSF Advisory Panel in Mathematics, 1978–1981
Visiting committee, Brigham Young University, 1989
External committee to evaluate the graduate program, SUNY Buffalo 1990.
Visiting committee, Purdue University, 1991
Visiting committee, Ecole Polytechnique, Paris, 1995
NSF Division of Math. Sci. Committee of Visitors 2001.
Board of Mathematical Sciences 2000–2003.
US National Committee of the International Mathematical Union 2001–2004.
US Delegate to the general assembly of the International Mathematical Union, 2002.
Visiting Committee to the Mathematics Department, Seoul National University. 2005.
Committee on Electronic Information and Computing (CEIC) of the International Mathematical Union. 2006–2007
US National Committee of the International Mathematical Union 2009–present
Member of the International Mathematical Union Committee to select Fields Medalists, 2012–2014

At Brandeis University

Chairman, Department of Mathematics Brandeis University 1982–84 and 1992–94
Chairman, Tenure Task Force (a committee to examine Tenure at Brandeis) 1984–1986

Chairman, Tenure Board (The first Tenure Appeals Board at Brandeis) 1990–1992
Chairman, Provost Search Committee, 1991
Chairman, Council of the School of Science 1996–1997.

At University of California, Berkeley

Development Committee, 2004–
Distinguished Lecture Committee 2013–14

Conferences organized and co-organized (other than as Director of MSRI)

- Special Session on Commutative Algebra, AMS Winter Meeting, Washington DC 1975
- Singularities, Oberwolfach 1979
- Algebraic Geometry, AMS Summer Institute, Bowdoin 1985 (Chair of organizing committee)
- Algebraic Curves, Sundance 1988
- Special Session on Commutative Algebra and Algebraic Geometry, AMS Winter meeting 1989
- Free Resolutions in Algebraic Geometry, Sundance 1990
- Commutative Algebra and Algebraic Geometry, and their interactions with computer algebra. Eisenach 1991.
- Computational Algebraic Geometry, Cortona 1991
- Free Resolutions in Algebraic Geometry and Representation Theory, Oberwolfach 1992
- Computational Geometry (Member of the Research committee and principal lecturer) NSF Summer Institute, Amherst, 1992
- Europroj 94, Barcelona, Spain (Committee to choose speakers)
- Computational Algebraic Geometry. Oberwolfach 1995
- Special semester on Riemann Surfaces and related topics. Inst. Henri Poincaré, Paris, Spring 1995
- Europroj 95, Nordfjordeid, Norway (Committee to choose speakers)
- Experimental Methods in Commutative Algebra and Algebraic Geometry, Luminy 1996.
- Computational Algebraic Geometry. Dagstuhl 1997
- Classical Algebraic Geometry I: Moduli of curves and applications. Oberwolfach 1998 (Chair of organizing committee).
- Gröbner Bases. Guanajuato, Mexico, 1999
- Classical Algebraic Geometry II: Oberwolfach 2000 (Chair of organizing committee).
- Exterior Methods in Algebraic Geometry. Nato Advanced Studies Institute, Erice, 2001 (Chair of Organizing Committee).

- Algebra and Geometry. Hyderabad, 2001 (Chair of International Organizing Committee).
- Classical Algebraic Geometry III: Oberwolfach 2002 (Chair of organizing committee).
- Classical Algebraic Geometry IV: Oberwolfach 2004 (Chair of organizing committee).
- Commutative Algebra and Algebraic Geometry. Hanoi, December 2005.
- Classical Algebraic Geometry V: Oberwolfach 2006 (Chair of organizing committee).
- Current Events Bulletin sessions at the Annual Joint Meetings of the AMS and MAA, 2004– (originator and Chair of the Organizing Committees.)
- Conference on Boij-Söderberg theory, Cornell, March 2008
- Macaulay2 Conference, Cornell, March 2008
- Classical Algebraic Geometry VI: Oberwolfach 2008 (Chair of organizing committee).
- Classical Algebraic Geometry VII: Oberwolfach 2010 (Chair of organizing committee).
- Macaulay2 Workgroup meeting, Snowbird, July 2008.
- Macaulay2 Intense Collaboration Meeting on Integral Closure, MSRI, August 2009.
- Macaulay2 Intense Collaboration Meeting on Intersection Theory, MSRI, December 2009.
- Math Research Communities Meeting on Commutative Algebra, Snowbird, June 2010.
- Macaulay2 Intense Collaboration Meeting on Integral Closure II, MSRI, August 2010.
- Classical Algebraic Geometry VIII: Oberwolfach 2012 (Chair of organizing committee).
- MSRI Year-Long Program on Commutative Algebra, 2012-13 (Chair of organizing committee).
- Conference on Syzygies and Cohen-Macaulay Modules, Banff International Research Station, August, 2012.
- Classical Algebraic Geometry IX: Oberwolfach 2014 (Chair of organizing committee).

Editorships

Proceedings of the American Math. Society 1978 –1982
Asterisque (Société Mathématique de France) 1982 – 1987
Wadsworth Advanced Book series 1981 – 1992
Journal of Algebraic Geometry 1990 – 1995
Springer-Verlag series "Algorithms and Computation in Mathematics" 1995 –
Bulletin of the American Math. Soc. Research Expository Surveys 1996–1999
Mathematische Annalen 1997–1998
Pacific Journal of Math (Governing Board) 1997–2007
Bulletin de la Société Mathematique de France 1999–
Computers in Science and Engineering 1998–2006
Annals of of Mathematics (Associate Editor) 2000–2006
Algebra & Number Theory. Cofounder and Chair of Editorial Committee 2006–
Functional Analysis And Other Mathematics 2006–
Journal of Software for Algebra and Geometry: Macaulay2 2008–

GRANTS AND FELLOWSHIPS

NSF Individual Grant Support	1971–Present
Sloan Foundation Fellowship	1973–1975
Sundance Conference on Algebraic Curves (As Co-Principal Investigator)	1988
Amer. Math. Soc. Summer Institute on Algebraic Geometry (As chair of organizing committee),	1985
NSF U.S.-Bulgaria Research in Algebraic Geometry	1989–1994
NSF U.S.-Brazil Collaborative Research in Commutative Algebra, Algebraic Geometry, and Associated Computation	1991–1993
NSF Mathematical Sciences Research Equipment (SCREMS)	1990–1991
Mathematical Sciences Research Institute (many grants)	1997–2007
Macaulay2: A system for symbolic algebra.	2008–Present
Mathematical Sciences Research Institute (many grants)	2013–present

STUDENTS AND POSTDOCS

PhD students supervised

1. Ronald Sheets (co-advisor D. Buchsbaum)(1974) Deformation theory
2. Vikram Mehta (co-advisor R. Hartshorne) (1976) Endomorphisms of complexes and modules over golod rings
3. Craig Huneke (co-advisor N. Jacobson) (1978) Determinantal ideals and questions related to factoriality
4. Phillip Schwartau (1982) Liaison addition and monomial ideals
5. Karl Knight (1983) Some invariants associated with deformations of hypersurface singularities
6. Frank-Olaf Schreyer (1983) Syzygies of curves with special pencils
7. Gennady Lyubeznik (co-advisor H. Bass) (1984) Set theoretic intersections and monomial ideals
8. Fernando Serrano-Garcia (1985) Surfaces having a hyperplane section with a special pencil
9. Maria-Grazie Ascenzi (1985) The Restricted Tangent Bundle
10. Pradeep Shukla (1986) Deformation of certain modules on plane curve singularities
11. Jyotsna Gokhale (1986) Exploring the compactified Picard variety of a singular curve
12. Sung-Won Park (1990) Gonality and clifford index of graph curves
13. Lung-Ying Fong (1991) Studies on the degenerations of algebraic curves
14. Ngau Lam (1991) A study of the geometry of algebraic curves and determinantal varieties
15. Michael Johnson (1994) Higher secant varieties
16. Keith Pardue (1994) Nonstandard Borel-fixed ideals
17. Irena Peeva (1995) Free Resolutions
18. Francisco Gallego (1996) Syzygies of Ruled Surfaces
19. B. P. Purnaprajna (1996) Syzygies and degenerations of K3 surfaces
20 Andrea Bruno (1999) Degenerations of Linear Series and Binary Curves
21. Mircea Mustata (2001) The irreducibility of jet schemes
22. Gregory G. Smith (2001) Gröbner bases, differential operators, and graded rings.
23. Daniel Micah Giaimo (2004) On the Castelnuovo-Mumford Regularity of Curves and Reduced Schemes
24. George Kirkup (2004) Random Variables with Completely Independent Subcollections
25. Jameel Al-Aidroos (2008) Perfect pairings in the tautological rings of the modli
26. Daniel Erman (2010) Applications and Extensions of Boij-Söderberg Theory
27. Claudiu Raicu (2011) Secant Varieties of Segre-Veronese Varieties
28. Morgan Brown (2012) Cox Rings and Partial Amplitude

29. Adam Boocher (2013) Superflatness
30. Thanh Quang Vu (2014) Combinatorial Patterns in Syzygies spaces of stable curves

NSF and other postdocs sponsored (in addition to those at MSRI)

Steven Diaz (1983–85)
Michael Stillman (1985–87)
Jee Heub Koh (1985–87)
Alyson Reeves (1992–94)
Hara Charalambous (1993–94)
Sorin Popescu (1994–96)
Allen Knutson (1996–98)
Brian Osserman (2004–07)
Giulio Caviglia (2004–07)
Daniel Robertz (2008–09)
Janko Böhm (2009–10)

PUBLICATIONS

Books and Monographs

1. **Hodge Algebras**, (with C. DeConcini and C. Procesi), Asterisque 91, Société Mathématique de France, Paris, (1982).
2. **Three dimensional Link Theory and Invariants of Plane Curve Singularities**, (with W. Neumann), Annals of Math. Studies 110, Princeton University Press Princeton NJ (1985).
3. **Schemes: The Language of Modern Algebraic Geometry**, (with J. Harris). Wadsworth, Belmont, California, 1992.
4. **Proceedings of the Sundance Conference on Free resolutions in Commutative Algebra and Algebraic Geometry 1990**, (editor, with C. Huneke) Jones and Bartlett, Boston Massachusetts, 1992.
5. **Computational Algebraic Geometry and Commutative Algebra, Cortona 1991**, (ed. D. Eisenbud and L. Robbiano) Symposia Mathematica XXXVI, Cambridge University Press, Cambridge, England, 1993.
6. **Commutative Algebra With A View Toward Algebraic Geometry**, Graduate Text 150, Springer-Verlag, 1995.
7. **Commutative algebra, algebraic geometry, and computational methods.** Proceedings of the Conference on Algebraic Geometry, Commutative Algebra, and Computation held in Hanoi, August 19–23, 1996. Edited by David Eisenbud. Springer-Verlag Singapore, Singapore, 1999. xviii+320. pp. ISBN: 981-4021-50-4
8. **The geometry of schemes** (with Joe Harris). Graduate Texts in Mathematics, 197. Springer-Verlag, New York, 2000. x+294 pp. ISBN: 0-387-98638-3; 0-387-98637-5
9. **Computations in Algebraic Geometry with Macaulay 2** (with Daniel R. Grayson, Michael Stillman and Bernd Sturmfels (Eds.)) Springer Verlag Berlin Heidelberg 2002.
10. **The geometry of syzygies. A second course in commutative algebra and algebraic geometry.** Graduate Texts in Mathematics, 229. Springer-Verlag, New York, 2005. xvi+243 pp. ISBN: 0-387-22215-4

Technical Papers

11. Groups of order automorphisms of certain homogeneous ordered sets, Mich. Math. J. 16 (1969) 59–63.

1970

12. Subrings of Artinian and Noetherian Rings, Math. Ann. 185 (1970) 247–249.
13. Modules over Dedekind Prime Rings (with J. C. Robson), J. Alg. 16 (1970) 67–85.
14. Hereditary Noetherian Prime Rings (with J. C. Robson), J. Alg. 16 (1970) 86– 104.

1971

15. Serial Rings (with P. A. Griffith), J. Alg. 17 (1971) 389–400.
16. The Structure of Serial Rings (with P. A. Griffith), Pacific Journal of Math. 36 (1971) 109–121.

1972

17. Lifting Modules and a Theorem on Finite Free Resolutions (with D. A. Buchsbaum), in **Ring Theory**, Park City 1971, Academic Press (1972) 63–74.
18. Basic Elements; Theorems from Algebraic K-Theory (with E. G. Evans), Bull. AMS 78 (1972) 546–549.

1973

19. What Makes a Complex Exact? (with D. A. Buchsbaum), J. of Alg., 25 (1973) 259–268.
20. Remarks on Ideals and Resolutions (with D. A. Buchsbaum), Symposia Math. XI, Academic Press, London (1973) 193–204.
21. Generating Modules Efficiently; Theorems from Algebraic K-Theory (with E. G. Evans), J. Alg. 27 (1973) 278–305.
22. Every Algebraic Set in n-Space is the Intersection of n Hypersurfaces (with E. G. Evans), Invent. Math. 19 (1973) 107–112.
23. On a Problem in Linear Algebra (with D. A. Buchsbaum), Proc. of the Kansas Conference on Commutative Rings, Springer Lect. Notes 311 (1973) 50–56.
24. Three Conjectures on Modules over Polynomial Rings (with E. G. Evans), Springer Lect. Notes in Math. 311 (1973) 78–89.

1974

25. Some structure theorems for finite free resolutions (with D. A. Buchsbaurm), Adv. in Math. 12 (1974) 84–139.
26. Adic approximation of complexes, and multiplicities, Nagoya Math. J. 54 (1974) 61–67.

1975

27. A survey of some results on free resolutions, **Proc. International Congress of Mathematicians, Vancouver, 1974** (1975) 303–308.
28. Generic Free Resolutions and a Family of Generically Perfect Ideals (with D. A. Buchsbaum), Adv. in Math. 18 (1975) 245–301.
29. Some directions of recent progress in commutative algebra, in **Proceedings of Symposium on Algebraic Geometry, Arcata 1974**, Proc. of Symposia in Pure Math. 29, Amer. Math. Soc. (1975).)
30. Notes on the topological degree of a smooth mapping, in **Conf. on Commutative Alg. 1975**, Queen's papers on Pure and Appl. Math. 42 (1975) 70– 79.

1976

31. The Topological degree of a finite C^∞ map germ (with H. Levine) in **Structural Stability, the Theory of Catastrophes, and Applications in the Sciences**, Springer Lect. Notes in Math. 525.
32. A Generalized Krull Principal Ideal Theorem (with E. G. Evans, Jr.), Nagoya Math. J. 62 (1976) 41–53.

1977

33. Algebra structures for free resolutions and structure theorems for ideals of codimension 3 (with D. A. Buchsbaum), Amer. J. of Math. 99 (1977) 447–485.
34. What annihilates a Module? (with D. A. Buchsbaum), J. Alg. 47 (1977) 231–243.
35. An algebraic formula for the degree of a C^∞ map germ (with H. Levine), Annals of Math. 106 (1977) 19–44.
36. Remarks on Regular Sequences, (with M. Herman W. Vogel), Nagoya Math. J. 67 (1977) 177–180.
37. Enriched free resolutions and change of rings, in **Séminaire d'Algèbre Paul Dubreil 1975-76**, Springer Lect. Notes in Math. (1977) 1–8.
38. Solution du probleme de Serre par Quillen-Suslin, in **Séminaire d'Algèbre Paul Dubreil 1975–76**, Springer Lect. Notes in Math. (1977) 9–19.

1978

39. An Algebraic Approach to the Topological Degree of a C^∞ Map, Bull. Amer. Math. Soc. 84 (1978) 751–764.

1979

40. A Nullstellensatz with Nilpotents (with M. Hochster), J. Alg. 58 (1979) 157– 161.
41. On the number of generators of ideals in local Cohen-Macaulay rings (with M. Boratynski and D. Rees), J. Alg. 57 (1979) 77–81.

1980

42. Introduction to algebras with straightening laws, in**Ring Theory and algebra III, Norman Oklahoma 1979**, Lect. Notes in pure and appl. Math., Marcel Dekker, New York (1980) 243–268
43. Homological Algebra over a Complete Intersection, Trans. Am. Math. Soc. 260 (1980), 35–63.
44. Young Diagrams and Determinantal Varieties (with C. Procesi and C. DeConcini), Invent. Math. 56 (1980) 129–165.
45. Transcanonical embeddings of Hyperelliptic curves, J. Pure and Applied Alg. 19 (1980) 77–83.

1981

46. On the normal bundles of smooth rational space curves (with A. Van de Ven), Math. Ann. 256 (1981) 453–463.
47. Projective resolution of Cohen-Macaulay Algebras (with O. Riemenschneider and F.-O. Schreyer), Math. Ann. 257 (1981) 85–98.
48. Transverse foliations of Seifert bundles and self-homeomorphisms of the circle (with Ulrich Hirsch and Walter Neumann), Comm. Math. Helv. 56 (1981) 638–660.
49. Report on the normal bundles of curves in $\mathbf{P}^3$, in **Séminaire Paul Dubreil et Marie-Paul Malliavin 1980**, Springer Lect. Notes in Math. 867 (1981) 141–147.

1982

50. Projective summands in generators (with R. Wiegand and W. Vasconcelos), Nagoya Math. J. 86 (1982) 203–209.
51. On the variety of smooth rational space curves with given degree and normal bundle (with A. Van de Ven), Inv. Math. 67 (1982) 89–100.
52. Curves of almost maximal genus (with J. Harris), in **Curves in Projective Space**, Presses de l'Univ. de Montreal (1982) 81–131.

1983

53. Cohen-Macaulay Rees algebras and their specialization (with C. Huneke), J. Alg. 81 (1983) 202–224.
54. Rational curves with cusps, in **Singularities, Arcata**, Symposia in Pure Mathematics of the American Mathematical Society Vol. 40, (1983) 337–344.
55. Divisors on general curves and cuspidal rational curves (with J. Harris), Invent. Math. 74 (1983) 371–418.
56. A simpler proof of the Gieseker-Petri Theorem (with J. Harris), Invent. Math. 74 (1983) 269–280.
57. On the Brill-Noether Theorem, in **Open Problems in Algebraic Geometry**, Springer L. N. Math.997 (1983) 131–137.

1984

58. Linear free resolutions and minimal multiplicity (with S. Goto), J. Alg. 88 (1984) 89–133.
59. Limit linear series, the irrationality of M_g, and other applications, Bull. AMS 10 (1984) 277–280.

1985

60. Recent progress in the study of Weierstrass points (with J. Harris), in **Geometry Today**, Birkhauser Boston, Progress in Math. 60 (1985) 121–127.

1986

61. Limit linear series: basic theory (with J. Harris), Invent. Math. 85 (1986) 337–371.

1987

62. On varieties of minimal degree (a centennial account), (with J. Harris), in **Algebraic Geometry, Bowdoin 1985**, Symposia in Pure and App. Math. 46 (1987) 1–14.
63. Existence, decomposition, and limits of certain Weierstrass points (with J. Harris), Invent. Math. 87 (1987) 495–515.
64. The monodromy of Weierstrass points (with J. Harris), Invent. Math. 90 (1987) 333–341.
65. When ramification points meet (with J. Harris), Invent. Math. 87 (1987) 485–493.
66. The irreducibility and monodromy of some families of linear series (with J. Harris), Ann. Sci. de l'Ec. Norm. Sup. 20 (1987) 65–87.
67. The Kodaira dimension of the moduli space of curves of genus ≥ 23 (with J. Harris), Invent. Math. 90 (1987) 359–387.
68. Cohen-Macaulay Modules on quadrics (with R.-O.Buchweitz and J. Herzog), Springer Lect. Notes in Math.1273 (1987) 58–116.
69. On the resiliency of determinantal ideals, in **Commutative Algebra and Combinatorics (Kyoto, 1985)** 29–38 (1987), North-Holland, Amsterdam.

1988

70. The classification of homogeneous Cohen-Macaulay rings of finite Cohen- Macaulay type, (with J. Herzog), Math. Ann. 280 (1988) 347–352.
71. Determinantal equations for curves of high degree (with J. Koh and M. Stillman), Am. J. Math. 110 (1988) 513–539.
72. Linear Sections of Determinantal Varieties, Am. J. Math. 110 (1988) 541–575.
73. Vector spaces of matrices of low rank (with J. Harris), Adv. in Math. 70 (1988) 135–155.
74. Varieties cut out by quadrics: scheme-theoretic versus homogeneous generation of ideals (with Lawrence Ein and Sheldon Katz), in **Algebraic Geometry, Sundance**

1986, Springer Lect. Notes 1311, ed. A. Holme and R. Speiser. pp. 51–71 (1988).

1989

75. Remarks on points in a projective space (with J. Koh), in **Commutative Algebra, Berkeley**, Math. Sci. Res. Inst. Publ. 15, Springer Verlag NY (1989) 157–173.
76. Rank Varieties of Matrices (with D. Saltman), in **Commutative Algebra, Berkeley**, Math. Sci. Res. Inst.Publ. 15, Springer Verlag NY (1989) pp. 173–213.
77. Progress in the theory of Algebraic Curves (with J. Harris), Bull. AMS 21 (1989) 205–232.
78. The Clifford dimension of a projective curve (with H.Lange, G. Martens, and F.-O. Schreyer) Compositio Math. 72 (1989) 173–204.
79. Irreducibility of some families of linear series (with J. Harris), Ann. Sci. l'Ec. Norm. Sup. 22 (1989) 33–53.

1990

80. Ideals with a regular sequence as syzygy, appendix (with C. Huneke) to "Sur les hypersurfaces dont les sections hyperplanes sont a module constant", by Arnaud Beauville, in **The Grothendieck Festschrift**, Vol. I, Progress in Math. 86 (1990) 121–133, Birkhauser Boston.

1991

81. On the Hurwitz scheme and its monodromy (with N. Elkies, J. Harris, and R. Speiser), Compositio Math. 77 (1991) 95–117.
82. Some linear syzygy conjectures (with J. Koh), Adv. in Math. 90 (1991) 47–76.
83. Graph curves (with D. Bayer), Advances in Math. 86 (1991) 1–40.

1992

84. Direct methods for primary decomposition (with C. Huneke and W. Vasconcelos) Invent. Math. 110 (1992) 207–235.
85. Finite projective schemes in linearly general position (with J. Harris) Journal of Algebraic Geometry 1 (1992) 15–30.
86. An excess intersection formula, and some applications (with J. Harris), Journal of Algebraic Geometry 1 (1992) 31–60.
87. The dimension of the Chow variety of curves (with J. Harris), Compositio Math. 83 (1992) 291–310.
88. Green's Conjecture: An orientation for algebraists, in **Proceedings of the Sundance conference in Free Resolutions in Commutative Algebra and Algebraic Geometry, Suncance 90**, (ed. David Eisenbud and C. Huneke), Jones and Bartlett, Boston (1992) 51–79.
89. Regularity of modules over a Koszul Algebra (with L. L. Avramov) Journal of Algebra

153 (1992) 85–90.

1993

90. Open Problems in Computational Algebraic Geometry and commutative Algebra, in **Computational Algebraic Geometry and Commutative Algebra, Cortona 1991**, (ed. D. Eisenbud and L. Robbiano) Cambridge University Press, Cambridge, England, (1993) 49–71.
91. Higher Castelnuovo Theory (with M. Green and J. Harris), in **Journées de géométrie Algébrique d'Orsay**, Astérisque 218 (1993) 187–202.

1994

92. Juggling drops and descents (with J. Buhler, R. Graham, and C. Wright). American Math. Monthly (1994) 507–519.
93. Nets of skew forms and the linear syzygy conjecture, (with Jee Koh). Adv. in Math. 106 (1994) 1–35.
94. Finding sparse systems of parameters, (with B. Sturmfels) J. of Pure and Appl. Alg. 94 (1994) 143–157.
95. Ideals of minors in free resolutions, (with M. Green) Duke J. Math. 75 (1994) 339–352.
96. Initial ideals of Veronese subrings, (With A. Reeves and B. Totaro) Advances in Math. 109 (1994) 168–187.

1995

97. Ribbons and their canonical embeddings, (with D. Bayer) Trans. Am. Math. Soc. 347 (1995) 719–756.
98. Clifford indices of ribbons, (with M. Green) Trans. Am. Math. Soc. 347 (1995) 757–765.

1996

99. Binomial ideals (with B. Sturmfels), Duke Math. J. 84 (1996) 1–45.
100. Cayley-Bacharach Theorems and Conjectures (with M. Green and J. Harris), Bull. Amer. Math. Soc.33 (1996) 295–324.

1997

101. Evolutions, Symbolic Squares, and Fitting Ideals (with B. Mazur), J. Reine Angew. Math. 488 (1997), 189–201.
102. Modules that are Finite Birational Algebras (with B. Ulrich) Illinois J. Math. 41 (1997) 10–15.

1998

103. Noncommutative Gröbner bases for commutative ideals (with I. Peeva and B. Sturmfels), Proc. Amer. Math. Soc. 126 (1998), no. 3, 687–691.

104. Computing cohomology. Chapter of "Computational methods in Commutative Algebra and Algebraic Geometry" by W. Vasconcelos, Springer Verlag, Berlin, 1998.
105. Chains of maps between indecomposable modules (with J. A. de la Peña), J. Reine Angew. Math. 504 (1998), 29–35.
106. Lattice walks and primary decomposition (with P. Diaconis and B. Sturmfels), Mathematical essays in honor of Gian-Carlo Rota (Cambridge, MA, 1996), 173–193, Progr. Math., 161, Birkhuser Boston, Boston, MA, 1998.

1999

107. Gale Duality and Free Reolutions of ideals of points (with S. Popescu) Invent. Math. 136 (1999) 419–449.
108. Syzygy ideals for determinantal ideals and the syzygetic Castelnuovo lemma (with Sorin Popescu). Commutative algebra, algebraic geometry, and computational methods (Hanoi, 1996), 247–258, Springer, Singapore, 1999.

2000

109. The projective geometry of the Gale transform (with S. Popescu), J. Algebra 230 (2000) 127–173.
110. Cohomology on toric varieties and local cohomology with monomial supports. (with Mircea Mustata, and Mike Stillman). In Symbolic computation in algebra, analysis, and geometry (Berkeley, CA, 1998). J. Symbolic Comput. 29 (2000) 583–600.
111. Enriques Surfaces and other Non-Pfaffian Subcanonical Subschemes of Codimension 3 (with Charles Walter, and Sorin Popescu). Special issue in honor of Robin Hartshorne. Comm. Algebra 28 (2000) 5629–5653.

2001

112. Hilbert functions, residual intersections, and residually S_2 ideals (with Marc Chardin and Bernd Ulrich). Compositio Math. 125 (2001), no. 2, 193–219.
113. Appendix to "Jet schemes of locally complete intersection canonical singularities," by Mircea Mustaţ ă (with Edward Frenkel.) Invent. Math. 145 (2001), no. 3, 397–424.
114. Lagrangian subbundles and codimension 3 subcanonical subschemes (with Sorin Popescu and Charles Walter). Duke Math. J. 107 (2001), no. 3, 427–467.
115. A simple proof of some generalized principal ideal theorems (with Craig Huneke and Bernd Ulrich). Proc. Amer. Math. Soc. 129 (2001), no. 9, 2535–2540 (electronic).

2002

116. Exterior algebra methods for the minimal resolution conjecture (with Sorin Popescu, Frank-Olaf Schreyer, and Charles Walter). Duke Math. J. 112 (2002), no. 2, 379–395.
117. Projective Geometry and Homological Algebra. Expository chapter, pp. 18–40 in Computations in Algebraic Geometry with Macaulay 2 David Eisenbud, Daniel R. Grayson

and Bernd Sturmfels (Eds.) Springer Verlag Berlin Heidelberg 2002.

118. Sheaf algorithms using the exterior algebra (with Wolfram Decker). pp. 215–250 in Computations in Algebraic Geometry with Macaulay 2 David Eisenbud, Daniel R. Grayson and Bernd Sturmfels (Eds.) Springer Verlag Berlin Heidelberg 2002.
119. Periodic resolutions over exterior algebras. J. Algebra **258** (2002), no. 1, 348–361

2003

120. Resultants and Chow forms via exterior syzygies. (with F.-O. Schreyer and J. Weyman). J. Amer. Math. Soc. **16** (2003), 537–579.
121. What is the Rees algebra of a module? (with C. Huneke and B. Ulrich). Proc. Amer. Math. Soc. **131** (2003), no. 3, 701–708
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