Revised March, 2023

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
Director, Mathematical Sciences Research Institute, 2013– 2022

HONORS, PRIZES

Elected Fellow of the American Academy of Arts and Sciences, 2006
Leroy P. Steele Prize for Exposition, American Mathematical Society, 2010 "... in recognition of his book, **Commutative Algebra with a View Toward Algebraic Geometry**"
American Mathematical Society, 2020 Award for Distinguished Public Service"... for his exuberant advocacy on behalf of mathematics, exceptional leadership and outreach

efforts while serving as Director of MSR, President of the AMS, and Director for Mathematical and Physical Sciences at the Simons Foundation."

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

Committee to award the AMS Postdoctoral Fellowships 1988–1990
Committee On Professional Ethics 1994–1995

Council
1978–1982 (as member of the editorial board of PAMS)
1983–1985 (as member at large)
1998–1999 (as managing editor of BAMS)
Executive Committee of the Council 2000–2003

Vice President 2000–2003
President-Elect 2002-03
President 2003–2005
Immediate Past President 2005–2006

Founder and Chair of the annual Current Events Bulletin Special Sessions at the Joint Mathematical Meetings, January 2003–
Co-founder and Chair of the Mathematics Research Communities Program, 2008–2017

Boards of Directors

Mathematical Sciences Research Institute: 1997–2007(ex officio); 2007-2013 (elected) 2013–2022 (ex officio) 2022–present Emeritus
Math for America 2004–present
Simons Foundation 2013–present

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 and 2009–2012
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

Member of the International Mathematical Union Committee to select Fields Medalists, 2012–2014

Member, Advisory Committee to the Vice President of the Korean Institute of Advanced Study (KIAS) 2010-2018

Visiting Committees, Tata Institute for Fundamental Research, Mumbai, 2005

Visiting Committee (Chair) Tata Institute for Fundamental Research, Mumbai, 2019

A dvisory Committee (Chair) Okinawa Institute of Technology (2019–)

V isiting Committee (Chair) Research Institute of the Mathematical Sciences (RIMS), Tokyo, 2021

Member, planning committee for the International Congress of Mathematicians, Philadelphia 2026.

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 and 2017–18

Some accomplishments at MSRI

First and foremost, I have worked to keep the research activities of MSRI at a very high level, with many improvements in the functioning of MSRI's governance committees, the Scientific Advisory Committee, the Human Resources Advisory Committee, the Education Advisory Committee, and the Board of Trustees.

Community Support and Infrastructure: Under my leadership at MSRI 1997–2007 and 2013–2022 and that of Robert Bryant (2007–2013), MSRI has gone from 27 Academic Sponsors to 112 Academic Sponsors; from 1-2 Summer Graduate Schools per year to 12 Summer Graduate Schools in 2022; from a building of about 26,000 square feet to one of about 48,000 square feet; and from zero endowment to about $130 Million Endowment.

Financial Support: In this period MSRI has gone from complete dependence on the NSF to roughly 50% dependence; from a budget of about $3,000,000 to a budget of about

$12,000,000 per year; from no endowed positions to 4 endowed professorships, and a number of endowed postdoctoral positions. I helped create a Corporate Affiliation with Hewlett-Packard Laboratories (1999–2004) and have started a Corporate Partners program with Citadel as the first member (2019).

Support for Women and Minorities: I have overseen the creation of family friendly programs for visiting researchers, and special programs for women (Connections workshops, Summer Research for Women) and U.S. Minorities, including effective arrangements encouraging the participation of these groups in MSRI's Summer Graduate Schools, the highly successful undergraduate program for minorities called MSRI-UP and the new ADJOINT program. In addition I have sponsored the production of films on Maryam Mirzakhani and raised $1.5 Million toward a Professorship in her name (the fundraising is ongoing). I have also organized the funding for a documentary film project "Journey's of Black Mathematicians", Directed by George Csicsery; the creation of this film is also ongoing.

Public Understanding of Mathematics: I have helped create significant programs for the general public, such as the support of the Numberphile YouTube channel and Podcast, the Mathical Books Prize, the National Math Circles Library, the Celebration of Mind events, the National Math Festival, and the YouTube series for teachers, "Inspiring Voices from the Classroom". In my watch MSRI started a National Math Circles organization (now spun off to AIM) that helped create a national movement, currently with roughly 150 "Circles" around the country. I have collaborated with the AMS to produce two Congressional Briefings on applications of fundamental mathematics each year (they had previously produced one/year). I have created a relationship with the Chicago Mercantile Exchange that has resulted in an annual MSRI/CME Group prize for mathematical economics.

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).
- Classical Algebraic Geometry X: Oberwolfach 2016 (Chair of organizing committee).
- Matrix Factorizations, Simons Center for Geometry and Physics, Stony Brook, 2016.
- Prospects in Commutative Algebra: Osaka, 2017
- Instruments of Algebraic Geometry: Bucharest, 2017
- Classical Algebraic Geometry XI: Oberwolfach 2018 (Chair of organizing committee).
- Conference on Commutative Algebra, Notre Dame University, 2019
- Classical Algebraic Geometry XII: Oberwolfach 2021 (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: 2008–
Acta Math. Vietnamica (guest editor for special issue on Commutative Algebra) 2016–

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 moduli spaces of stable curves
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
31. Yi-Chang (Justin) Chen (2017) On Betti Tables, Monomial Ideals, and Unit Groups
32. Ben Wormleighton (2020) Numerics and stability for orbifolds with applications to symplectic embeddings
33. Mengyuan Zhang (2020) Liaison of curves and bundles
34. Christopher Eur (2020) The Geometry of Divisors on Matroids
35. Ritvik Ramkumar (2022) The Geometry of Hilbert Schemes on Projective Space

NSF and other postdocs sponsored

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)
Alexander Pavlov(2015-16)
Mina Bigdeli (2016-17)
Alessio Sammartano (2017-18)
Juliette Bruce (2019-20)

PUBLICATIONS

Books and Monographs

1. **Seminar D. Eisenbud/B. Singh/W. Vogel** , (Ed.), Vol. 1, volume 29 of Teubner-Texte zur Mathematik [Teubner Texts in Mathematics]. BSB B. G. Teubner Verlagsgesellschaft, Leipzig, (1980).
2. **Hodge Algebras**, (with C. DeConcini and C. Procesi), Asterisque 91, Société Mathématique de France, Paris, (1982).
3. **Seminar D. Eisenbud/B. Singh/W. Vogel** , (Ed.), Vol. 2, volume 48 of Teubner-Texte zur Mathematik [Teubner Texts in Mathematics]. BSB B. G. Teubner Verlagsgesellschaft, Leipzig, (1980).
4. **Three dimensional Link Theory and Invariants of Plane Curve Singularities**, (with W. Neumann), Annals of Math. Studies 110, Princeton University Press Princeton NJ (1985).
5. **Algebraic geometry, Bowdoin, 1985, Part 1**, Ed. by Spencer J. Bloch, with the collaboratio of H. Clemens, D. Eisenbud, W. Fulton, D. Gieseker, J. Harris, R. Hartshorne, and S. Mori., Providence, RI. 1987. American Mathematical Society.
6. **Algebraic geometry, Bowdoin, 1985, Part 2**, Ed. by Spencer J. Bloch, with the collaboratio of H. Clemens, D. Eisenbud, W. Fulton, D. Gieseker, J. Harris, R. Hartshorne, and S. Mori., Providence, RI. 1987. American Mathematical Society.
7. **Schemes: The Language of Modern Algebraic Geometry**, (with J. Harris). Wadsworth, Belmont, California, 1992.
8. **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.
9. **Computational Algebraic Geometry and Commutative Algebra, Cortona 1991**, (ed. D. Eisenbud and L. Robbiano) Symposia Mathematica XXXVI, Cambridge University Press, Cambridge, England, 1993.
10. **Commutative Algebra With A View Toward Algebraic Geometry**, Graduate Text 150, Springer-Verlag, 1995.
11. **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
12. **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
13. **Computations in Algebraic Geometry with Macaulay 2** (with Daniel R. Grayson, Michael Stillman and Bernd Sturmfels (Eds.)) Springer Verlag Berlin Heidelberg 2002.

14. **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
15. **3264 and all that—a second course in algebraic geometry** (with J. Harris). Cambridge University Press, Cambridge, 2016. xiv+616 pp. ISBN: 978-1-107-60272-4; 978-1-107-01708-5
16. **Minimal free resolutions over complete intersections** (with I. Peeva). Lecture Notes in Mathematics, 2152. Springer, Cham, 2016. x+107 pp. ISBN: 978-3-319-26436-3; 978-3-319-26437-0

Technical Papers

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

1970

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

1971

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

1972

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

1973

25. What Makes a Complex Exact? (with D. A. Buchsbaum), J. of Alg., 25 (1973) 259–268.
26. Remarks on Ideals and Resolutions (with D. A. Buchsbaum), Symposia Math. XI, Academic Press, London (1973) 193–204.
27. Generating Modules Efficiently; Theorems from Algebraic K-Theory (with E. G. Evans), J. Alg. 27 (1973) 278–305.
28. Every Algebraic Set in n-Space is the Intersection of n Hypersurfaces (with E. G. Evans), Invent. Math. 19 (1973) 107–112.
29. 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.
30. Three Conjectures on Modules over Polynomial Rings (with E. G. Evans), Springer Lect. Notes in Math. 311 (1973) 78–89.

1974

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

1975

33. A survey of some results on free resolutions, **Proc. International Congress of Mathematicians, Vancouver, 1974** (1975) 303–308.
34. Generic Free Resolutions and a Family of Generically Perfect Ideals (with D. A. Buchsbaum), Adv. in Math. 18 (1975) 245–301.
35. 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).)
36. 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

37. 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.
38. A Generalized Krull Principal Ideal Theorem (with E. G. Evans, Jr.), Nagoya Math. J. 62 (1976) 41–53.

1977

39. 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.
40. What annihilates a Module? (with D. A. Buchsbaum), J. Alg. 47 (1977) 231–243.
41. An algebraic formula for the degree of a C^∞ map germ (with H. Levine), Annals of Math. 106 (1977) 19–44.
42. Remarks on Regular Sequences, (with M. Herman W. Vogel), Nagoya Math. J. 67 (1977) 177–180.
43. Enriched free resolutions and change of rings, in **Séminaire d'Algèbre Paul Dubreil 1975-76**, Springer Lect. Notes in Math. (1977) 1–8.
44. 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

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

1979

46. A Nullstellensatz with Nilpotents (with M. Hochster), J. Alg. 58 (1979) 157– 161.
47. 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

48. 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
49. Homological Algebra over a Complete Intersection, Trans. Am. Math. Soc. 260 (1980), 35–63.
50. Young Diagrams and Determinantal Varieties (with C. Procesi and C. DeConcini), Invent. Math. 56 (1980) 129–165.
51. Transcanonical embeddings of Hyperelliptic curves, J. Pure and Applied Alg. 19 (1980) 77–83.

1981

52. On the normal bundles of smooth rational space curves (with A. Van de Ven), Math. Ann. 256 (1981) 453–463.
53. Projective resolution of Cohen-Macaulay Algebras (with O. Riemenschneider and F.-O. Schreyer), Math. Ann. 257 (1981) 85–98.
54. Transverse foliations of Seifert bundles and self-homeomorphisms of the circle (with Ulrich Hirsch and Walter Neumann), Comm. Math. Helv. 56 (1981) 638–660.
55. 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

56. Gorenstein ideals of height 3 (with D.A. Buchsbaum), In Seminar D. Eisenbud/B. Singh/W. Vogel, Vol. 2, volume 48 or Teubner-Texte zur Math., (30–48. Teubner, Leipzig, (1982).
57. Projective summands in generators (with R. Wiegand and W. Vasconcelos), Nagoya Math. J. 86 (1982) 203–209.
58. 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.
59. Curves of almost maximal genus (with J. Harris), in **Curves in Projective Space**, Presses de l'Univ. de Montreal (1982) 81–131.

1983

60. Cohen-Macaulay Rees algebras and their specialization (with C. Huneke), J. Alg. 81 (1983) 202–224.
61. Rational curves with cusps, in **Singularities, Arcata**, Symposia in Pure Mathematics of the American Mathematical Society Vol. 40, (1983) 337–344.
62. Divisors on general curves and cuspidal rational curves (with J. Harris), Invent. Math. 74 (1983) 371–418.
63. A simpler proof of the Gieseker-Petri Theorem (with J. Harris), Invent. Math. 74 (1983) 269–280.

64. On the Brill-Noether Theorem, in **Open Problems in Algebraic Geometry**, Springer L. N. Math.997 (1983) 131–137.

1984

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

1985

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

1986

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

1987

69. 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.
70. Existence, decomposition, and limits of certain Weierstrass points (with J. Harris), Invent. Math. 87 (1987) 495–515.
71. The monodromy of Weierstrass points (with J. Harris), Invent. Math. 90 (1987) 333–341.
72. When ramification points meet (with J. Harris), Invent. Math. 87 (1987) 485–493.
73. The irreducibility and monodromy of some families of linear series (with J. Harris), Ann. Sci. de l'Ec. Norm. Sup. 20 (1987) 65–87.
74. The Kodaira dimension of the moduli space of curves of genus ≥ 23 (with J. Harris), Invent. Math. 90 (1987) 359–387.
75. Cohen-Macaulay Modules on quadrics (with R.-O.Buchweitz and J. Herzog), Springer Lect. Notes in Math.1273 (1987) 58–116.
76. On the resiliency of determinantal ideals, in **Commutative Algebra and Combinatorics (Kyoto, 1985)** 29–38 (1987), North-Holland, Amsterdam.

1988

77. The classification of homogeneous Cohen-Macaulay rings of finite Cohen- Macaulay type, (with J. Herzog), Math. Ann. 280 (1988) 347–352.
78. Determinantal equations for curves of high degree (with J. Koh and M. Stillman), Am. J. Math. 110 (1988) 513–539.
79. Linear Sections of Determinantal Varieties, Am. J. Math. 110 (1988) 541–575.
80. Vector spaces of matrices of low rank (with J. Harris), Adv. in Math. 70 (1988) 135–155.

81. 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

82. 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.
83. Rank Varieties of Matrices (with D. Saltman), in **Commutative Algebra, Berkeley**, Math. Sci. Res. Inst.Publ. 15, Springer Verlag NY (1989) pp. 173–213.
84. Progress in the theory of Algebraic Curves (with J. Harris), Bull. AMS 21 (1989) 205–232.
85. The Clifford dimension of a projective curve (with H.Lange, G. Martens, and F.-O. Schreyer) Compositio Math. 72 (1989) 173–204.
86. Irreducibility of some families of linear series (with J. Harris), Ann. Sci. l'Ec. Norm. Sup. 22 (1989) 33–53.

1990

87. 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

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

1992

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