

Curriculum Vitae of Juan C. Migliore

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Date of Birth: February 23, 1956

Place of Birth: Asunción, Paraguay
Citizenship: USA

Education:

Haverford College B.A. 1978

Brown University, Ph.D. 1983

Honors, Prizes, Grants, Post-Doctoral Fellowships, ETC.

- My paper “Symbolic powers of codimension two Cohen-Macaulay ideals” (with S. Cooper, G. Fatabbi, E. Guardo, A. Lorenzini, U. Nagel, A. Seceleanu, J. Szpond and A. Van Tuyl) was one of the two inaugural winners of the Earl J. Taft Memorial Award for the journal Communications in Algebra, 2024.
- Co-Principal Investigator on NSF grant 2312044, “Conference: Center for Mathematics at Notre Dame,” \$49,180. (Principal Investigator is Eric Riedl.)
- I was invited to give the Inaugural Talk at the VII Meeting of Researchers (la conferencia Inaugural del VII Encuentro de Investigadores) at the Sociedad Científica del Paraguay. (July 26, 2022. Declined due to existing travel commitments.)
- I was elected as a Member of the Academia de Ciencias de América Latina (Academy of Science of Latin America), May 2022.
- I was awarded \$25,000 CAD from the Fields Institute (Toronto), \$5,000 CAD from the NSF and 7,500 euros from the Foundation Compositio to organize the “Workshop on Lefschetz Properties in Algebra, Geometry, Topology and Combinatorics” (co-organizers Graham Denham, Roberta Di Gennaro and Rosa María Miró-Roig), to be held May 15–19, 2023.
- Simons Foundation grant #839618, September 1, 2021 – August 31, 2026.
- I was awarded the 2018 Shilts/Leonard Teaching Award in the College of Science, University of Notre Dame.
- The Midwest Commutative Algebra and Algebraic Geometry Conference was organized and run in honor of my sixtieth birthday. The conference was held at the University of Notre Dame from May 16 to 19, 2016. There were 18 invited speakers, a poster session, and approximately 100 participants.
- Simons Foundation grant #309556, September 1, 2014 – August 31, 2019. Granted one-year no-cost extension. Granted second one-year no-cost extension because of COVID-19. Granted third one-year extension because of COVID-19.
- NSA Grant NSA Grant H98230-12-1-0204, January 18, 2012 – July 17, 2014.

- Invited to give the inaugural talk for the Coloquio Paraguayo de Matemática y Ciencias Afines and the Escuela de Matemática de Latinoamérica y el Caribe, held at the Sociedad Científica del Paraguay on October 13, 2011. Gave the talk “Los planos proyectivos.”
- Simons Foundation grant, July 1, 2011 – August 31, 2013. It was originally awarded as a 5-year grant, but upon the awarding of an NSA grant (H98230-12-1-0204) it was reduced to one year, plus a second year no-cost extension of the first year.
- Associate editor, *Le Matematiche*, 2009 – 2016.
- NSA Grant H98230-09-1-0031, December 22, 2008 – June 30, 2011.
- NSA Grant No. H98230-07-1-0036, January 8, 2007 – January 7, 2009.
- NSF Grant No. DMS-0509607 (co-PI, with C. Polini as PI and A. Corso also as co-PI) for the Midwest Algebra, Geometry and their Interactions Conference, held at the University of Notre Dame, October 8-11, 2005.
- IMA grant (\$5000, with C. Polini and A. Corso) for the Midwest Algebra, Geometry and their Interactions Conference (MAGIC05) held at Notre Dame October 8-11, 2005.
- MSRI grant (\$1000, with C. Polini and A. Corso) for the Midwest Algebra, Geometry and their Interactions Conference (MAGIC05) held at Notre Dame October 8-11, 2005.
- Kaneb Teaching Award, College of Science, University of Notre Dame, May, 2004
- NSA Grant No. MDA904-03-1-0071, February 1, 2003 – January 31, 2005.
- Grant from the Francis M. Kobayashi Faculty Research Travel Program (University of Notre Dame) for travel to Oberwolfach (Germany) in September/October, 2002.
- NSF Grant No. DMS97-03871 (with A. Sommese) for the Midwest Algebraic Geometry Conference, held at the University of Notre Dame, November 7-9, 1997.
- Jesse H. Jones Faculty Research Grant (University of Notre Dame) (with J. Rosenthal), 1992
- NSF Fellowship No. RCD-8751173: NATO Postdoctoral Fellowship in Science, 1987
- Sigma Xi, 1983
- Phi Beta Kappa, 1978

Positions held:

1994-present	Professor, Department of Mathematics, University of Notre Dame
2013	Professore Visitatore, Università di Siena (Italy), June 24 – July 2, 2013.
2011	Visiting Professor at Universidad Nacional de Asunción, Facultad de Ingeniería, Oct. 10 – Oct. 21, 2011
2000 (summer)	CNR Visiting professor, Università di Catania
1993 (spring)	Visitor, Queen’s University
1990 (summer)	CNR Visiting professor, Università di Trento

1989-1994	Associate Professor, Department of Mathematics, University of Notre Dame
1987-1988	Visitor, Università di Trento
1985-1989	Assistant Professor of Mathematics, Drew University
1983-1985	Assistant Professor of Mathematics, Northwestern University
1983	Research Assistant, Brown University
1978-1982	Teaching Assistant, Brown University

Professional Societies:

American Mathematical Society
Mathematical Association of America

Professional Service:

- Reviewer for Zentralblatt für Mathematik since 1990
- Reviewer for Mathematical Reviews since 1994
- Chair of the External Review Committee for the Department of Mathematical Sciences at Villanova University, October 2002.
- External evaluator for promotion cases: Rutgers University (1991), Hong Kong University (1996), University of Kentucky (2004), Texas Christian University (2004), University of Kentucky (2006), Tulane University (2007), Texas Christian University (2010), Lakehead University (2011), Oklahoma State University (2011), Texas Christian University (2012), Tulane University (2013), University of South Carolina (2013), Oklahoma State University (2014), Michigan Technological University (2015), Miami University (Ohio) (2017), University of Idaho (2018), Oklahoma State University (2018), Penn State Greater Allegheny (2019), Widener University (2020), Purdue University (2021), Cleveland State University (2022), University of Trento (Italy) (2023).
- Judge for Siemens Competition Regional finals, November 8, 2014
Judge for Siemens Competition Regional finals, November 14, 2015
- Reviewer for Simons Foundation Collaboration Grants, 2016, 2022
- Reviewer for INdAM COFUND-2012 fellowship programme, funded by the VII Framework Programme of the European Union, June, 2016

Administrative Duties:

2008-2016	Associate Chairman of the Mathematics Department
2000-2004	Director of Undergraduate Studies of the Mathematics Department.
1995-1996	Associate Chairman of the Mathematics Department
1990-2000	Chairman of the Faculty Meeting of the Mathematics Department

Committees:

2025	Graduate admissions (algebra/algebraic geometry)
2024 -	Undergraduate Service Committee

2024	Graduate admissions (algebra/algebraic geometry)
2023	Shilts-Leonard Selection Committee, College of Science
2022 - 2024	Executive Committee, Mathematics Department (term interrupted because of sabbatical)
2022 - 2024	Undergraduate Committee, Mathematics Department (term interrupted because of sabbatical)
2022	Teaching Professor Search Committee, Mathematics Department
2021	Open Search Committee, Mathematics Department
2020	Hiring Search Committee, Mathematics Department
2019 - 2022	Undergraduate Committee, Mathematics Department
2019	Shilts-Leonard Selection Committee, College of Science
2018 - 2021	College Council
2018 - 2021	Graduate Admissions Committee (Algebra)
2017-2019	Committee on Appointments and Promotions
2008-2009	Department of Mathematics Award Committee
2007-2008	Graduate Council, University of Notre Dame
2007	Selection committee for the Awards for Excellence in Undergraduate Teaching
2006-2009	Undergraduate Committee, Mathematics Department
2000-2004	Undergraduate Studies Committee, College of Science
2000-2004	Teacher Education Committee, St. Mary's College
1999-2000	Mathematics Department's Bookstore Representative
1997-2004	Undergraduate Committee, Mathematics Department
1996-2000	Honesty Committee, Mathematics Department
1995-1998	Executive Committee, Mathematics Department

Ph.D. Students and Postdoctoral Fellows supervised:

Jietai Yu	(Ph.D. Notre Dame 1994) <i>On the Jacobian Conjecture and a Product Formula for Minimal Polynomials</i>
Chris Peterson	(Ph.D. Duke 1994) <i>Applications of Liaison Theory to Schemes Supported on Lines, Growth of the Deficiency Module, and Low Rank Vector Bundles</i>
Mark Buckles	(Ph.D. Notre Dame 2002, co-advisor Karen Chandler) <i>Homogeneous fat point schemes in the projective plane with the points in general position</i>
Joshua Lesperance	(Ph.D. Notre Dame 2002) <i>Gorenstein Liaison of Curves in $\mathbb{P}^4$</i>
Elisa Gorla	(Ph.D. Notre Dame 2004) <i>Lifting Properties from the General Hyperplane Section of a Projective Scheme</i>
Lousindi Sabourin	Postdoctoral fellow (supported by NSERC) 2002-2003. (Migliore also served as External Examiner at Sabourin's thesis defense, Queen's University, July, 2002.)
Jea-Man Ahn	Research Visitor 1/29/04–10/1/04 (doctoral student of Prof. Young

	Hyun Cho, Seoul National University).
Bernadette Boyle	(Ph.D. Notre Dame 2012) <i>On the Unimodality of Pure O-Sequences</i>
Megan Patnott	(Ph.D. Notre Dame 2013) <i>Arithmetically Gorenstein sets of points on general surfaces in $\mathbb{P}^3$</i>
David Cook II	Department Postdoctoral Fellow 2012–2014 under Migliore’s supervision
Giuseppe Favacchio	Research Visitor for Fall Semester, 2012 (doctoral student of Prof. Alfio Ragusa, University of Catania).
Erin Bela	(Ph.D. Notre Dame 2018) <i>Numerical Macaulification in arbitrary codimension.</i>
Emanuela Marangone	(Ph.D. Notre Dame 2024) <i>The non-Lefschetz locus of lines and conics.</i>
Nikola Kuzmanovski	Kenna Postdoctoral Research Associate, 2024–2027 under Migliore’s supervision.

Masters theses supervised:

Emanuela Marangone	Visiting masters student from the University of Udine, Fall, 2018 (masters student of Prof. Pietro De Poi, Univ. Udine) <i>On the Lefschetz properties</i> (2019). She graduated cum laude with the highest possible score from Udine.
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Undergraduate theses supervised:

Bryan Ahern	<i>Generalizations and insights from the Cayley-Bacharach theorem</i> , 2008
Luke Reifenberg	<i>Three Proofs of Chasles’ Theorem</i> , 2022
Ryan Lynch	<i>Waring’s problem and the Alexander-Hirschowitz theorem</i> , 2023

Books

- [1] J. Migliore, “An Introduction to Deficiency Modules and Liaison Theory for Subschemes of Projective Space,” (monograph, 1994) Global Analysis Research Center, Seoul National University, Lecture Notes Series No. 24.
- [2] J. Migliore, “Introduction to Liaison Theory and Deficiency Modules,” Birkhäuser, Progress in Mathematics 165, 1998; 224 pp. Hardcover, ISBN 0-8176-4027-4.
- [3] A. Corso, J. Migliore and C. Polini (editors), “Algebra, Geometry and their Interactions (Notre Dame 2005),” Contemporary Math. vol. 448 (2007), ISBN-10: 0-8218-4094-0, ISBN-13: 978-0-8218-4094-8.

Articles and Preprints:

1986

- [1] J. Migliore, *Geometric Invariants for Liaison of Space Curves*, J. Algebra 99, no. 2, (1986), 548-572.
- [2] J. Migliore, *On Linking Double Lines*, Trans. Amer. Math. Soc. 294 (1986), no. 1, 177-185.
- [3] J. Migliore, *Buchsbaum Curves in $\mathbb{P}^3$* , Proceedings of the Conference on Algebraic Geometry, East Berlin, 1985, Teubner-Texte zur Mathematik no. 92.
- [4] J. Migliore, *Examples in Liaison*, The Curves Seminar at Queen's, vol. IV, Queen's Papers in Pure and Appl. Math.

1987

- [5] J. Migliore, *Liaison of a Union of Skew Lines in $\mathbb{P}^4$* , Pacific J. Math. 130 (1987), no. 1, 153-170.
- [6] G. Bolondi and J. Migliore, *Classification of Maximal Rank Curves in the Liaison Class $\mathbf{L}_n$* , Math. Ann. 277 (1987), no. 4, 585-603.

1988

- [7] A.V. Geramita and J. Migliore, *On the Ideal of an Arithmetically Buchsbaum Curve*, J. Pure Appl. Algebra 54 (1988), no. 2-3, 215-247.

1989

- [8] G. Bolondi and J. Migliore, *Buchsbaum Liaison Classes*, J. Algebra 123 (1989) 426-456.
- [9] A.V. Geramita and J. Migliore, *Generators for the Ideal of an Arithmetically Buchsbaum Curve*, J. Pure Appl. Algebra 58 (1989), no. 2, 147-167.
- [10] G. Bolondi and J. Migliore, *The Structure of an Even Liaison Class*, Trans. Amer. Math. Soc. 316 (1989), no. 1, 1-37.
- [11] A.V. Geramita and J. Migliore, *Hyperplane Sections of a Smooth Curve in $\mathbf{P}^3$* , Comm. Algebra 17 (1989), no. 12, 3129-3164.
- [12] G. Bolondi and J. Migliore, *Configurations of Linear Projective Subvarieties*, in "Algebraic Curves and Projective Geometry, Proceedings (Trento, 1988)," Lecture Notes in Mathematics, vol. 1389, Springer-Verlag (1989), 19-31.
- [13] G. Bolondi and J. Migliore, *The Lazarsfeld-Rao Problem for Buchsbaum Curves*, Rend. Sem. Mat. Univ. Padova 82 (1989), 67-97.
- [14] J. Migliore, *Even Liaison*, in the Curves Seminar at Queen's, vol. VI, Queen's Papers in Pure and Applied Mathematics (1989)

1990

- [15] J. Migliore and R. Miró-Roig, *On k -Buchsbaum Curves in $\mathbf{P}^3$* Comm. Algebra 18(8) (1990), 2403-2422.
- [16] E. Ballico and J. Migliore, *Smooth Curves Whose Hyperplane Section is a given set of points*, Comm. Algebra 18(9) (1990), 3015-3040.

1991

- [17] E. Ballico, G. Bolondi and J. Migliore, *The Lazarsfeld-Rao problem for liaison classes of two-codimensional subschemes of $\mathbf{P}^n$* , Amer. J. Math. 113 (1991), 117-128.

1993

- [18] G. Bolondi and J. Migliore, *The Lazarsfeld-Rao property on an arithmetically Gorenstein variety*, Manuscripta Math. 78 Fasc. 4 (1993), 347–368.
- [19] G. Bolondi and J. Migliore, *On curves with natural cohomology and their deficiency modules*, Ann. Inst. Fourier (Grenoble) 43 (2) (1993), 325–357.
- [20] J. Migliore, *Submodules of the deficiency module*, J. London Math. Soc. 48(3) (1993), 396–414.

1994

- [21] A.V. Geramita and J. Migliore, *A Generalized Liaison Addition*, J. Algebra 163 (1994), no. 1, 139–164.
- [22] J. Migliore, *The Curves Seminar Proceedings: 1992-1993*, two Lectures, in The Curves Seminar at Queen’s, vol. IX, Queen’s Papers in Pure and Applied Mathematics (1994).
- [23] J. Migliore, *Hypersurface sections of curves*, in the Proceedings of the International Conference on Zero-Dimensional Schemes, Ravello 1992, De Gruyter (1994), 269–282.
- [24] A. Bigatti, A.V. Geramita and J. Migliore, *Geometric Consequences of Extremal Behavior in a Theorem of Macaulay*, Trans. Amer. Math. Soc. 346 (1994), no. 1, 203–235.

1995

- [25] J. Migliore and U. Nagel, *On the Cohen-Macaulay type of the general Hypersurface section of a Curve*, Math. Zeit. 219 (1995), no. 2, 245–273.

1996

- [26] J. Migliore, C. Peterson and Y. Pitteloud, *Ropes in Projective Space*, J. Math. Kyoto Univ. 36 (1996), no. 2, 251–278.

1997

- [27] A.V. Geramita and J. Migliore, *Reduced Gorenstein Codimension Three Subschemes of Projective Space*, Proc. Amer. Math. Soc. 125 (1997), no. 4, 943–950.
- [28] J. Migliore and C. Peterson, *A construction of codimension three arithmetically Gorenstein subschemes of projective space*, Trans. Amer. Math. Soc. 349 (1997), no. 9, 3803–3821.
- [29] H. Martin and J. Migliore, *Submodules of the Deficiency Modules and an Extension of Dubreil’s Theorem*, J. London Math. Soc. (2) **56** (1997), no. 3, 463–476.

1998

- [30] H. Martin, J. Migliore and S. Nollet, *Degrees of generators of ideals defining curves in projective space*, Comm. Algebra **26(4)** (1998), 1209–1231.

1999

- [31] J. Migliore, *Gorenstein liaison via divisors*. In: Proceedings of the Workshop on “Free Resolution of coordinate rings of Projective Varieties” held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, July 1998. Surikaiseikikenkyusho Kokyuroku (1999).

- [32] J. Migliore, U. Nagel and C. Peterson, *Buchsbaum-Rim sheaves and their multiple sections*, J. Algebra **219** (1999), no. 1, 378-420.

2000

- [33] M. Kreuzer, J. Migliore, U. Nagel and C. Peterson, *Determinantal Schemes and Buchsbaum-Rim Sheaves*, J. Pure Appl. Algebra **150** (2000), no. 2, 155–174.
- [34] J. Migliore, U. Nagel and C. Peterson, *Constructing Schemes with Prescribed Cohomology in Arbitrary Codimension*, J. Pure Appl. Algebra **152** (2000) (special volume in honor of David Buchsbaum), no. 1–3, 245–251.
- [35] J. Migliore and U. Nagel, *Lifting Monomial Ideals*, Comm. Algebra **28** (2000) (special volume in honor of Robin Hartshorne), no. 12, 5679-5701.
- [36] S.P. Diaz, A.V. Geramita and J. Migliore, *Resolutions of subsets of finite sets of points in projective space*, Comm. Algebra **28** (2000) (special volume in honor of Robin Hartshorne), no. 12, 5715-5733.

2001

- [37] J. Migliore, U. Nagel and C. Peterson, *Bezout's theorem and Cohen-Macaulay modules*, Math. Zeit. **237** (2001), no. 2, 373–394.
- [38] J. Kleppe, J. Migliore, R.M. Miró-Roig, U. Nagel and C. Peterson, *Gorenstein Liaison, Complete Intersection Liaison Invariants and Unobstructedness*, Memoirs of the Amer. Math. Soc. Vol. 154, 2001; 116 pp. Softcover, ISBN 0-8218-2738-3.

2002

- [39] J. Migliore and U. Nagel, *Reduced arithmetically Gorenstein schemes with prescribed properties*, Queen's Papers in Pure and Applied Mathematics **123** (2002).
- [40] J. Migliore and U. Nagel, *Monomial Ideals and the Gorenstein Liaison Class of a Complete Intersection*, Compositio Math. **133** (2002), no. 1, 25–36.

2003

- [41] J. Migliore and R. Miró-Roig, *On the Minimal Free Resolution of $n+1$ Generic Forms*, Trans. Amer. Math. Soc. **355** (2003), no. 1, 1–36.
- [42] T. Harima, J. Migliore, U. Nagel and J. Watanabe, *The Weak and Strong Lefschetz Properties for Artinian K -Algebras*, J. Algebra **262** (2003), no. 1, 99-126.
- [43] J. Migliore and U. Nagel, *Liaison and Related Topics: Notes from the Torino Workshop/School*, Rendiconti del Seminario Matematico-Università e Politecnico di Torino **59**, **2** (2001), 59–126 (but appeared in 2003).
- [44] J. Migliore and R. Miró-Roig, *Ideals of general forms and the ubiquity of the Weak Lefschetz Property*, J. Pure Appl. Algebra **182** (2003), no. 1, 79-107.
- [45] J. Migliore and U. Nagel, *Reduced arithmetically Gorenstein schemes and Simplicial Polytopes with maximal Betti numbers*, Adv. Math. **180** (2003), no. 1, 1–63.

2004

- [46] J. Migliore and C. Peterson, *A symbolic test for (i, j) -uniformity in reduced zero-dimensional schemes*, J. Symbolic Computation **37**(3) (2004), 403–413.

2005

- [47] J. Migliore, R. Miró-Roig and U. Nagel, *Minimal resolution of relatively compressed level algebras*, J. Algebra **284** (2005), no. 1, 333–370.
- [48] J. Migliore and U. Nagel, *Tetrahedral curves*, Int. Math. Res. Notices **2005** (2005), no. 15, 899–939.
- [49] J. Migliore, U. Nagel and T. Roemer, *The multiplicity conjecture in low codimensions*, Math. Res. Lett. **12** (2005), 731–748.

2006

- [50] J. Migliore, *Families of reduced zero-dimensional schemes*, Collectanea Mathematica **57**,2 (2006), 173–192.
- [51] A.V. Geramita, J. Migliore and L. Sabourin, *On the first infinitesimal neighborhood of a linear configuration of points in $\mathbb{P}^2$* , J. Algebra **298** (2) (2006), 563–611.
- [52] C. Francisco, J. Migliore and U. Nagel, *On the componentwise linearity and the minimal free resolution of a tetrahedral curve*, J. Algebra **299** (2) (2006), 535–569.

2007

- [53] J. Ahn and J. Migliore, *Some geometric results arising from the Borel-fixed property*, J. Pure Appl. Algebra **209** (2007), no. 2, 337–360.
- [54] A.V. Geramita, T. Harima, J. Migliore and Y. Shin, *The Hilbert function of a level algebra*, Memoirs of the Amer. Math. Soc. vol. 186 (2007), 139 pp., ISBN-10: 0-8218-3940-3, ISBN-13: 978-0-8218-3940-9
- [55] J. Migliore and F. Zanello, *The Hilbert functions which force the Weak Lefschetz Property*, J. Pure Appl. Algebra **210** (No. 2) (2007), 465–471.
- [56] J. Migliore, *The Geometry of Hilbert Functions*, In: “Syzygies and Hilbert functions,” Lecture Notes in Pure and Applied Mathematics, vol. 254 (ed. Irena Peeva), CRC Press (2007), 179–208.
- [57] C. Huneke, J. Migliore, U. Nagel and B. Ulrich, *Minimal Homogeneous Liaison and Licci Ideals*, in: “Algebra, Geometry and their Interactions (Notre Dame 2005),” Contemporary Math. vol. 448 (2007), 129–139.

2008

- [58] J. Migliore, U. Nagel and T. Römer, *Extensions of the Multiplicity Conjecture*, Trans. Amer. Math. Soc. **360** no. 6 (2008), 2965–2985.
- [59] R. Hartshorne, J. Migliore and U. Nagel, *Liaison addition and the structure of a Gorenstein liaison class*, J. Algebra **319** (2008), no. 8, 3324–3342.
- [60] J. Migliore, *The geometry of the Weak Lefschetz Property and level sets of points*, Canadian J. of Math. **60** (2) (2008), 391–411.
- [61] J. Migliore, U. Nagel and F. Zanello, *An improved multiplicity conjecture for codimension three Gorenstein algebras*, Comm. Algebra **36** (2008), no. 1, 112–119.

- [62] J. Migliore, U. Nagel and F. Zanello, *A characterization of Gorenstein Hilbert functions in codimension four with small initial degree*, Math. Res. Lett. **15** no. 2 (2008), 331-349.
- [63] J. Migliore, U. Nagel and F. Zanello, *On the degree two entry of a Gorenstein h -vector and a conjecture of Stanley*, Proc. Amer. Math. Soc. **136**, no. 8 (2008), 2755-2762.
- [64] J. Migliore and F. Zanello, *The strength of the Weak Lefschetz Property*, Illinois Journal of Mathematics **52** (2008), No. 4, 1417-1433.

2009

- [65] J. Migliore, U. Nagel and F. Zanello, *Bounds and asymptotic minimal growth for Gorenstein Hilbert functions*, J. Algebra **321** (2009), No. 5, 1510–1521.
- [66] A.V. Geramita, B. Harbourne and J. Migliore, *Classifying Hilbert functions of fat point subschemes of $\mathbb{P}^2$* , Collect. Math. **60** (2009), No. 2, 159–192.
- [67] J. Hauenstein, J. Migliore, C. Peterson and A. Sommese, *Numerical computation of the dimensions of the cohomology of twists of ideal sheaves*, in: “Interactions of Classical and Numerical Algebraic Geometry (Notre Dame 2008),” Contemporary Math. vol. 496 (2009), 235–242.

2010

- [68] J. Migliore and U. Nagel, *Minimal Links and a Result of Gaeta*, In: “Liaison, Schottky Problem and Invariant Theory: Remembering Federico Gaeta,” Progress in Mathematics, Vol. 280 (2010), 103-132, Birkhäuser.

2011

- [69] J. Migliore, R. Miró-Roig and U. Nagel, *Monomial ideals, almost complete intersections and the Weak Lefschetz Property*, Trans. Amer. Math. Soc. **363**, No. 1 (2011), 229–257.
- [70] J. Migliore and M. Patnott, *Minimal Free Resolutions of General Points Lying on Cubic Surfaces in $\mathbb{P}^3$* , J. Pure Appl. Algebra **215** (2011), 1737-1746.

2012

- [71] L. Chiantini and J. Migliore, *Determinantal representation and subschemes of general plane curves*, Linear Algebra and its Applications **436**, Issue 5, 1 March 2012, 1001–1013.
- [72] M. Boij, J. Migliore, R. Miró-Roig, U. Nagel and F. Zanello, *On the shape of a pure O -sequence*, Memoirs Amer. Math. Soc. vol. 218, No. 2024, July, 2012.
- [73] A.V. Geramita, B. Harbourne and J. Migliore, *Hilbert functions of fat point subschemes of the plane: the two-fold way*, in: Progress in Commutative Algebra 1, Ó de Gruyter (2012), 55-84.
- [74] J. Migliore, R. Miró-Roig and U. Nagel, *On the Weak Lefschetz Property for powers of linear forms*, Algebra & Number Theory **6**, no. 3 (2012), 487-526.

2013

- [75] A.V. Geramita, B. Harbourne and J. Migliore, *Star configurations in $\mathbb{P}^n$* , J. Algebra **376** (2013) 279–299.

- [76] J. Migliore, U. Nagel and F. Zanello, *Pure O-sequences: known results, applications, and open problems*, in “Commutative Algebra: Expository Papers Dedicated to David Eisenbud on the Occasion of His 65th Birthday,” Springer-Verlag (2013), 535–559.
- [77] E. Gorla, J. Migliore and U. Nagel, *Gröbner bases via linkage*, J. Algebra **384** (2013), 110-134.
- [78] J. Migliore and U. Nagel, *Gorenstein algebras presented by quadrics*, Collectanea Mathematica 64, Issue 2 (2013), 211-233.
- [79] J. Migliore and U. Nagel, *Numerical Macaulification*, in: “A Celebration of Algebraic Geometry”, edited by Brendan Hassett, James Mckernan, Jason Starr and Ravi Vakil, Clay Mathematics Proceedings 18 (2013), 509-534.
- [80] J. Migliore and U. Nagel, *Glicci ideals*, Compositio Mathematica **149** (2013), 1583-1591.
- [81] J. Migliore, R. Miró-Roig, S. Murai, U. Nagel and J. Watanabe, *On ideals with the Rees property*, Archiv der Mathematik (Basel) **101** (2013), no. 5, 445–454.
- [82] J. Migliore and U. Nagel, *A Tour of the Weak and Strong Lefschetz Properties*, J. Comm. Algebra 5 (2013), no. 3, 329-358.

2014

- [83] M. Boij, J. Migliore, R. Miró-Roig, U. Nagel and F. Zanello, *On the Weak Lefschetz Property for artinian Gorenstein algebras of codimension three*, J. Algebra **403** (2014), 48-68.

2015

- [84] L. Chiantini and J. Migliore, *Almost maximal growth of the Hilbert function*, J. Algebra **431** (2015), 38-77.

2016

- [85] D. Cook II, J. Migliore, U. Nagel and F. Zanello, *An algebraic approach to finite projective planes*, J. Algebraic Combinatorics **43** (2016), no. 3, 495–519.

2017

- [86] J. Migliore and F. Zanello, *Stanley’s nonunimodal Gorenstein h -vector is optimal*, Proc. Amer. Math. Soc. **145**, No. 1 (2017), 1–9.
- [87] A.V. Geramita, B. Harbourne, J. Migliore and U. Nagel, *Matroid configurations and symbolic powers of their ideals*, Trans. Amer. Math. Soc. **369**, no. 10 (2017), 7049–7066.

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- [88] J. Ahn, J. Migliore and Y-S Shin, *Green’s theorem and Gorenstein sequences*, J. Pure Appl. Algebra **222** (2018), no. 2, 387–413.
- [89] J. Migliore and R. Miró-Roig, *On the strong Lefschetz problem for uniform powers of general linear forms in $k[x, y, z]$* , Proc. Amer. Math. Soc. **146** (2018), no. 2, 507–523.
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- [91] M. Boij, J. Migliore, R.M. Miró-Roig and U. Nagel, *The non-Lefschetz locus*, J. Algebra **505** (2018), 288–320.
- [92] G. Favacchio, E. Guardo and J. Migliore, *On the arithmetically Cohen-Macaulay property for sets of points in multiprojective spaces*, Proc. Amer. Math. Soc. **146**, no. 7 (2018), 2811–2825.
- [93] D. Cook II, B. Harbourne, J. Migliore and U. Nagel, *Line arrangements and configurations of points with an unexpected geometric property*, Compositio Mathematica **154** (2018), no. 10, 2150–2194.

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- [94] M. Boij, J. Migliore, R.M. Miró-Roig and U. Nagel, *The minimal resolution conjecture on a general quartic surface in $\mathbb{P}^3$* , J. Pure Appl. Algebra **223**, no. 4 (2019), 1456–1471.
- [95] G. Favacchio and J. Migliore, *Multiprojective spaces and the arithmetically Cohen-Macaulay property*, Math. Proc. Camb. Phil. Soc. **166** (2019), 583–597.
- [96] M. Catalisano, A.V. Geramita, A. Gimigliano, B. Harbourne, J. Migliore, U. Nagel and Y.S. Shin, *Secant Varieties of the Varieties of Reducible Hyper-surfaces in $\mathbb{P}^n$* , J. Algebra **528** (2019), 381–438.

2020

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- [99] B. Harbourne, J. Migliore and H. Tutaj-Gasinska, *New constructions of unexpected hypersurfaces in $\mathbb{P}^n$* , Revista Matemática Complutense **34** (2021), 1–18.
- [100] L. Chiantini and J. Migliore, *Sets of points which project to complete intersections, and unexpected cones*, Trans. Amer. Math. Soc. **374** (2021), 2581–2607.
- [101] G. Favacchio and J. Migliore, *The ACM property for codimension two varieties in $\mathbb{P}^1 \times \mathbb{P}^2$* , J. Pure Applied Algebra **225** (2021), no. 11, 106739.
- [102] B. Harbourne, J. Migliore, U. Nagel and Z. Teitler, *Unexpected hypersurfaces and where to find them*, Michigan Math. Journal **70** (2021), 301–339.
- [103] G. Favacchio, E. Guardo, B. Harbourne and J. Migliore, *Expecting the unexpected: quantifying the persistence of unexpected hypersurfaces*, Advances in Math. **388** (2021), 107857.
- [104] J. Migliore and U. Nagel, *The Lefschetz question for ideals generated by powers of linear forms in few variables*, J. Commutative Algebra **13** (2021), 381–405.

2022

- [105] J. Migliore, U. Nagel and H. Schenck, *Schemes supported on the singular locus of a hyperplane arrangement in $\mathbb{P}^n$* , Int. Math. Res. Not. **2022** (2022), 140–170.

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- [107] J. Migliore and U. Nagel, *Applications of liaison*, in: Commutative Algebra – Expository Papers Dedicated to David Eisenbud on the Occasion of his 75th Birthday (Irena Peeva editor), Springer ISBN 978-3-030-89693-5 (2022).

2023

- [108] *On the Weak Lefschetz Property for height four equigenerated complete intersections*, M. Boij, J. Migliore, R.M. Miró-Roig and U. Nagel, Trans. Amer. Math. Soc. Ser. B 10 (2023), 1254–1286.

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- [109] B. Harbourne, J. Migliore and U. Nagel, *Unexpected hypersurfaces and their consequences: A Survey*, In: Lefschetz Properties: Current and New Directions, proceedings of the conference “The Strong and Weak Lefschetz Properties, Cortona 2022.” Springer INdAM Series, volume 59, 2024. eBook ISBN 978-981-97-3886-1. Print ISBN 978-981-97-3885-4.
- [110] L. Chiantini, L. Farnik, G. Favacchio, B. Harbourne, J. Migliore, T. Szemberg and J. Szpond, *On the classification of certain geproci sets*. In: Lefschetz Properties: Current and New Directions, proceedings of the conference “The Strong and Weak Lefschetz Properties, Cortona 2022.” Springer INdAM Series, volume 59, 2024. eBook ISBN 978-981-97-3886-1. Print ISBN 978-981-97-3885-4.
- [111] J. Migliore and U. Nagel, *Jacobian schemes arising from hypersurface arrangements in $\mathbb{P}^n$* , arXiv:2312.01192. International Mathematics Research Notices 2024(17) (2024), 12303-12326.

2025

- [112] L. Chiantini, P. De Poi, L. Farnik, G. Favacchio, B. Harbourne, G. Ilardi, J. Migliore, T. Szemberg and J. Szpond, *Geproci sets on skew lines in $\mathbb{P}^3$ with two transversals*, arXiv:2312.04644. J. Pure Appl. Algebra 229 (2025) 107809.
- [113] L. Chiantini, L. Farnik, G. Favacchio, B. Harbourne, J. Migliore, T. Szemberg and J. Szpond, *Finite sets of points in P^4 with special projection properties*, arxiv:2407.01744. Geometriae Dedicata 219:27 (2025), <https://link.springer.com/article/10.1007/s10711-025-00990-y>.
- [114] J. Migliore and G. Favacchio, *Lefschetz properties in Algebra, Geometry and Combinatorics: Notes for the Preparatory School*, Annales Universitatis Paedagogicae Cracoviensis Studia Mathematica 24 (2025), 49-141.

To appear:

- [115] G. Favacchio and J. Migliore, *On the Weak Lefschetz Property for certain ideals generated by powers of linear forms*, arxiv:2406.09571. To appear in the Kyoto Journal of Mathematics.
- [116] G. Favacchio, E. Guardo and J. Migliore, *Correction to: On the arithmetically Cohen-Macaulay property for sets of points in multiprojective spaces, originally Proc. Amer. Math. Soc. 146, no. 7 (2018), 2811-2825*, to appear in PAMS.

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- [118] L. Chiantini, L. Farnik, G. Favacchio, B. Harbourne, J. Migliore, T. Szemberg and J. Szpond, *Combinatorics of skew lines in $\mathbb{P}^3$ with an application to algebraic geometry*, revised preprint 2025, arXiv:2308.00761v2.
- [119] M. Boij, J. Migliore, R. Miró-Roig and U. Nagel, *The weak Lefschetz property for artinian Gorenstein algebras of small Sperner number*, preprint 2024, arxiv:2406.17943.
- [120] J. McCullough, J. Migliore, S. Murai, U. Nagel and I. Peeva, *Hilbert functions*, Cambridge University Press for the LMS Lecture Note Series. . .

Schools taught:

- 2000:** Selected to be one of the primary instructors (along with A.V. Geramita, K. Hulek and K. Ranestad) of PRAGMATIC, short for “Promotion of Research in Algebraic Geometry for MAThematicians in Isolated Centres,” a month-long program held every year at the University of Catania. The title of the course was “Some special rings of algebraic geometry.” Students came from Italy, the United States, Turkey, Spain, Germany, Norway, Romania, Ukraine and Canada (June).
- 2001:** One of two instructors (along with U. Nagel) in the “School (and Workshop) on Liaison and Related Topics” at the Politecnico di Torino, Italy. Both lecturers gave five 1 1/2 hour talks to students from Spain, Switzerland and several cities in Italy. A volume of “Rendiconti del Seminario Matematico-Università e Politecnico di Torino” was dedicated to the notes from these lectures, and to contributed papers from the students. (October)
- 2005:** One of two instructors (along with Serkan Hosten) for the Fourth CoCoA International School on Computer Algebra, held in Porto Conte (Sardinia, Italy) from May 23-26, 2005. Migliore taught the course “Experiments in Commutative Algebra and Algebraic Geometry.” (“CoCoA” is short for “Computations in Commutative Algebra.”) There were 29 students, from nine countries. (May)

2006: One of two instructors (along with Andrew Sommese, University of Notre Dame) of the summer program “Undergraduate research on computational algebraic geometry and numerical analysis.” This was run for eight weeks, with one to two lectures a day; and with four students for most of the period. Funding came from the Center for Applied Mathematics and NSF grant DMS04-10047 (Sommese). (May–July)

One of two instructors (along with Aldo Conca, University of Genova) of a course given under the auspices of the Scuola Matematica Interuniversitaria. The course was held in Cortona, Italy, from July 2-14, 2006. The joint course was entitled “Syzygies, Hilbert functions and generic initial ideals.” There were 19 students, from 6 countries. The course involved daily lectures (total of 11 each) by both instructors, and a seminar talk by each student. (July)

2011: One of two instructors (along with Chris Peterson, Colorado State University) of the two-week course “Geometría Algebraica,” forming part of the Escuela de Matemática de Latinoamérica y el Caribe and the Coloquio Paraguayo de Matemática y Ciencias Afines, held in Asunción, Paraguay, from October 10 to October 21, 2011. There were five courses, several seminar talks, and several round table discussions. 17 students took the final exam, while several more attended the entire course.

2015: One of two instructors (along with Chris Peterson, Colorado State University) of the two-week course “Aplicaciones del Álgebra Abstracta a la Ingeniería.” Held at the Universidad Nacional de Asunción (Paraguay) from July 20 to 30. 10 students took the final exam, but many more were in attendance for most of the course.

2018: I taught a 4-week course on “Commutative Algebra and Geometry” as part of the Scuola Matematica Interuniversitaria in Perugia, Italy, from July 23 to August 17, 2018. My expenses were fully covered. There were 18 students, from several countries. There were 6 hours of lectures per week, plus another 3 hours of problem sessions per week.

2023: I gave the talk “Gorenstein liaison - the non-ACM case and Hartshorne-Rao modules” at the Commutative Algebra and its Interactions with Algebraic Geometry CMND/SLMath-MSRI Joint Workshop, June 1, 2023. The audience was graduate students.

I gave a series of five undergraduate colloquium lectures entitled “Projective planes and beyond” as part of the Thematic Program on Rationality and Hyperbolicity (organized by Eric Riedl) at the Center for Mathematics at the University of Notre Dame.

2024: I was one of three principal instructors (there were also three assistants) for the Preparatory School for the Conference on Lefschetz Properties in Algebra, Geometry, Topology and Combinatorics. The school took place May 5-11, 2024 in Kraków, Poland. There were approximately 40 students, from approximately 10 countries.

Conferences and Special Sessions Organized

Midwest Algebraic Geometry Conference, held at the University of Notre Dame, November 7-9, 1997.

Special Session on Commutative Algebra, co-organized with Chris Peterson, AMS meeting, University of Notre Dame, Notre Dame, IN, April 8-9, 2000.

Conference on zero-dimensional schemes and related topics (in honor of Anthony V. Geramita), Acireale, Italy, June 6-8, 2002.

Special Session on Algebraic Geometry and Commutative Algebra, co-organized with Uwe Nagel, AMS meeting, Nashville, TN, October 16-17, 2004.

Midwest Algebra, Geometry and their Interactions Conference (MAGIC05), held at the University of Notre Dame, October 7-11, 2005.

Special Session on Combinatorial Algebraic Geometry, co-organized with Uwe Nagel, AMS meeting, University of Notre Dame, Notre Dame, IN, April 8-9, 2006.

Special Session on Combinatorial and Geometric Aspects of Commutative Algebra, co-organized with Uwe Nagel, AMS meeting, Indiana University, Bloomington, IN, April 5-6, 2008.

Local organizer for the conference “Interactions of classical and numerical algebraic geometry,” held at the University of Notre Dame, May 22-24, 2008.

Special Session on Combinatorial Algebra, co-organized with Uwe Nagel, AMS meeting, University of Kentucky, Lexington, KY, March 27-28, 2010.

Midwest Algebra, Geometry and their Interactions Conference (MAGIC’10), held at the University of Notre Dame, April 23-25, 2010.

Special Session on Hilbert functions in Commutative Algebra and Algebraic Combinatorics, co-organized with Uwe Nagel and Fabrizio Zanello, at the 1064th meeting of the American Mathematical Society at Notre Dame, November 5-7, 2010.

Special Session on Combinatorial Commutative Algebra, co-organized with Uwe Nagel, AMS meeting, University of Louisville, Louisville, KY, October 5-6, 2013.

Special Session on Lefschetz Properties, co-organized with Uwe Nagel, AMS meeting, Ohio State University, Columbus, OH, March 17-18, 2018.

Workshop on Lefschetz Properties and Jordan Type in Algebra, Geometry and Combinatorics, co-organized with Sara Faridi, Giovanna Ilardi, Emilia Mezzetti and Rosa María Miró-Roig. The workshop took place in Levico Terme (Italy) on June 25-29, 2018. There were 38 participants.

Thematic Program in Commutative Algebra and its Interaction with Algebraic Geometry, University of Notre Dame, co-organized with Craig Huneke, Sonja Mapes, Claudia Polini, Claudiu Raicu and David Eisenbud. The conference took place May 28 - June 21, 2019.

The Lefschetz Properties in Algebra, Geometry and Combinatorics, Mathematisches Forschungsinstitut Oberwolfach (Germany), co-organized with Martina Juhnke-Kubitzke, Rosa María Miró-Roig and Justyna Szpond, September 27 - October 3, 2020. Hybrid conference, approximately 30 participants.

Subvarieties in Projective Spaces and Their Projections, Mathematisches Forschungsinstitut Oberwolfach (Germany), co-organized with Thomas Bauer, Giuseppe Favacchio and Justyna Szpond, November 27 – December 2, 2022.

Workshop on Lefschetz Properties in Algebra, Geometry, Topology and Combinatorics, Fields Institute (Toronto), co-organized with Graham Denham, Roberta Di Gennaro and Rosa María Miró-Roig, May 15–19, 2023.

Special Session on Varieties with unexpected hypersurfaces, geproci sets and their interactions, co-organized with Brian Harbourne, AMS meeting, Creighton University, Omaha, NE, October 7–8, 2023.

Conference on Commutative Algebra and its Interaction with Algebraic Geometry and Algebraic Combinatorics: A Conference on the Occasion of Uwe Nagel's 60th Birthday, University of Notre Dame, co-organized with Sonja Petrovic, Claudia Polini and Bernd Ulrich, August 12–16, 2024.

Workshop on Weak and Strong Lefschetz Properties across Mathematics, Sofus Lie Conference Center, Fjordane, Norway, June 2-6, 2025. Co-organized with Nancy Abdallah (University of Borås), Pedro Macias Marques (University of Évora), Chris McDaniel (Endicott College), Rosa Maria Miró-Roig (University of Barcelona), Justyna Szpond (University of the National Education Commission Krakow) and Tomasz Szemberg (University of the National Education Commission Krakow).

Conferences, Workshops, Research Stays:

- 1984:** Invited participant and speaker, Session on Algebra, AMS meeting, University of Notre Dame (April)
- 1985:** Participant and speaker, Session on Algebraic Geometry, AMS meeting, Anaheim, CA (January)
- Invited participant, AMS Summer Conference on Algebraic Geometry, Bowdoin College, Brunswick (July)
- Invited participant and speaker, International Conference on Algebraic Geometry, Humboldt-Universität, East Berlin, East Germany (November)
- 1988:** Invited participant and speaker, Special Session in Algebraic Geometry, AMS meeting, Lawrence (October)
- 1990:** Speaker, conference on the Geometry of Complex Projective Varieties, Cetraro, Italy (May)

- 1991:** Invited participant and speaker, Special session in Algebraic Geometry, AMS meeting, Fargo (October)
- 1992:** Invited participant and speaker, International Conference on Zero-dimensional Schemes, Ravello, Italy (June)
- 1993:** Invited participant and speaker, Special session in Algebraic Geometry and Commutative Algebra, AMS meeting, Syracuse (September)
 Speaker, Workshop on Hilbert Functions and Related Topics, Mathematical Sciences Institute, Cornell University (October)
- 1995:** Speaker, International Conference “COCOA IV” (Computational Commutative Algebra) (May)
- 1996:** Invited participant and speaker, Summer School on Commutative Algebra, Barcelona, Spain (July)
 Invited participant and speaker, Special session in Algebraic Geometry, AMS meeting, Columbia, MO (November)
- 1997:** Invited participant and speaker, Conference on Commutative Algebra and Algebraic Geometry, CIRM at Marseille-Luminy, France. This conference is by invitation only (May)
- 1998:** Invited participant and speaker (3 talks), Conference on Buchsbaum Varieties (in honor of David Buchsbaum), Catania, Italy (May)
 Invited participant and speaker, Conference on Homological Methods in Commutative Algebra and Algebraic Geometry (in honor of David Buchsbaum), Genova, Italy (May)
 Invited participant and speaker (4 talks), Workshop on Free Resolutions of the Defining Ideals of Projective Varieties, Kyoto University Research Institute for Mathematical Sciences, Kyoto, Japan (July)
- 1999:** Invited participant and speaker, Special Session in Commutative Algebra, AMS meeting, Urbana, IL (March)
- 2000:** Invited participant and speaker, Workshop on Zero-Dimensional Schemes and Applications, Napoli, Italy (February)
 Invited participant and speaker, Algebra Day, Indiana University, Bloomington, IN (April)
- 2001:** Invited participant and speaker, Special Session in Algebraic Geometry, AMS meeting, Lawrence, KS (March)
 Main speaker (one of six) at the CoCoA VII Conference (Computational Commutative Algebra), Kingston, Ontario (July)

- 2002:** Invited participant and speaker, Special Session on Commutative Algebra and the Geometry of Projective Varieties, joint meeting of AMS and UMI, Pisa, Italy (June)
- Invited participant and speaker, Current Trends in Commutative Algebra, Levico, Italy (June)
- Supported by Oberwolfach (Germany) for a two-week research project under their “Research in Pairs” program with R. Miró-Roig and U. Nagel (September-October)
- Invited participant and speaker, Special Session on Commutative Algebra, AMS meeting, Orlando, FL (November)
- 2003:** Invited participant in the workshop “Commutative Algebra and Geometry” at the Banff International Research Station for Mathematical Innovation and Discovery (BIRS) in Alberta, Canada, March 29 – April 3, 2003. This workshop is by invitation only (March-April)
- Invited participant and speaker in the Bluegrass Algebra Conference in Lexington, Kentucky (April)
- Invited participant and speaker, Special Session on Algebraic Geometry, at the First Joint International Meeting between the American Mathematical Society (AMS) and the Real Sociedad Matematica Espanola (RSME), Seville, Spain (June)
- Invited participant and speaker, Special Session on Commutative Algebra, at the XV Coloquio Latinamericano de Algebra, Cocoyoc (Morelos), Mexico (July)
- 2004:** Invited participant and speaker, Special Session on Syzygies and Hilbert Functions, AMS meeting, Tallahassee, Florida (March)
- Invited participant and speaker, Special Session on Commutative Algebra and Algebraic Geometry, AMS meeting, Lawrenceville, NJ (April)
- Invited participant and speaker, Midwest Commutative Algebra and Geometry Meeting: a Conference in Honor of Joseph Lipman, Purdue University, West Lafayette, IN (May)
- Invited participant and speaker, Conference on Commutative Algebra and Interactions to Algebraic Geometry and Combinatorics, at the International Centre for Theoretical Physics in Trieste, Italy (June)

- 2005:** Invited participant and speaker, Special Session on Hilbert Functions and Syzygies, 2nd Joint Meeting of the American Mathematical Society, the Deutsche Mathematiker-Vereinigung and the Oesterreichische Mathematische Gesellschaft, in Mainz, Germany (June)

Invited participant and speaker, Conference on Geometry of Algebraic Varieties, in Ferrara, Italy (June).

Invited participant and speaker, Special Session on Algebraic Geometry, AMS Meeting, Lincoln, NE (October).

- 2006:** Invited participant, Conference on Commutative Algebra and Its Interactions With Algebraic Geometry, CIRM at Marseille-Luminy, France. This conference is by invitation only (May).

Invited participant and speaker, Workshop on Syzygies and Hilbert functions, held at the Banff International Research Station in Banff, Canada. The workshop was by invitation only (October).

- 2007:** Invited participant and speaker, Special Session on Commutative Algebra and Algebraic Geometry, AMS meeting, Davidson, NC (March).

Invited participant, Workshop on Commutative Algebra and its Interaction with Algebraic Geometry, at the Banff International Research Station in Banff, Canada. This conference is by invitation only (June).

Invited participant and speaker, at the conference KUMUNU 2007, held at the University of Nebraska (KUMUNU stands for the universities of Kansas, Missouri and Nebraska) (September).

Invited participant and speaker, in the Special Session on Free Resolutions at the 1030th meeting of the American Mathematical Society at DePaul University, Chicago, IL (October).

- 2008:** Invited participant and speaker at the Conferencia Internacional sobre Álgebra Conmutativa, Combinatoria y Computacional en Memoria de Pilar Pisón Casares, at the University of Sevilla, Sevilla, Spain (February).

Invited participant and speaker at the Conference on Algebraic Geometry and Commutative Algebra (in honor of Robin Hartshorne), held at the University of Illinois at Chicago (April).

Invited participant and speaker at the conference on Commutative Algebra and its Interaction with Algebraic Geometry, at the Centre International de Rencontres Mathématiques in Marseille-Luminy, France. This conference is by invitation only (September-October).

Invited participant and speaker at the Special Session on Commutative Algebra and Algebraic Geometry at the annual meeting of the Canadian Mathematical Society in Ottawa, Canada (December).

- 2009:** Invited participant and speaker at the Special Session on Algebra, Geometry and Combinatorics, at the 1047th meeting of the American Mathematical Society at the University of Illinois at Urbana-Champaign (March).

Supported by CIRM (Centro internazionale per la ricerca matematica, Trento, Italy) for a two-week research project under their “Research in Pairs” program, with M. Boij, R. Miró-Roig, U. Nagel and F. Zanello (July). Local expenses paid.

Invited participant and speaker at the Special Session on Graded Resolutions, at the 1053rd meeting of the American Mathematical Society at Florida Atlantic University, Boca Raton, Florida (October).

- 2010:** Supported by CRM (Centre de Recerca Matemàtica, Barcelona, Spain) for a 10-day research project under their “Research in Pairs” program, with M. Boij, R. Miró-Roig, U. Nagel and F. Zanello (July). Local expenses paid.

- 2011:** Supported by KTH (Stockholm, Sweden) for a 12-day research project in collaboration with M. Boij, R. Miró-Roig and U. Nagel (May). Travel and accommodations paid.

Invited participant and speaker at the Midwest Commutative Algebra and Geometry Conference at Purdue University (May).

Invited participant and speaker in the Special Session on Combinatorial Algebraic Geometry, at the 1073rd meeting of the American Mathematical Society at Wake Forest University, Winston-Salem, North Carolina (September).

- 2012:** Invited participant and speaker in the Special Session on Combinatorial Commutative Algebra at the 1081st meeting of the American Mathematical Society at the University of Kansas, Lawrence, KS (March).

Gave two invited talks at the Workshop on Aspects of SLP and WLP at Hawaii Tokai International College, Honolulu, Hawaii. Travel and local expenses were paid by the organizer (September).

Gave the invited talk “Determinantal representation and subschemes of general plane curves” at the 22nd annual Route 81 Conference, “Interactions between commutative algebra and algebraic geometry” at Queen’s University, Kingston, Ontario (October).

- 2013:** Gave the invited talk “A symbolic test for uniformity of points in projective space” at the Michigan Computational Algebraic Geometry conference, Western Michigan University, Kalamazoo, MI (May).

Invited participant at the conference “Commutative Algebra and its Interaction with Algebraic Geometry” at CIRM in Luminy, France. This conference is by invitation only. The organizers paid for my meals and accommodation. (July)

Gave the invited talk “On the Weak Lefschetz Property for artinian Gorenstein algebras of codimension 3” at the Conference on Interaction between Commutative Algebra and Algebraic Geometry II, Tulane University, New Orleans (September 28).

Gave the invited talk “Almost maximal growth” in the Special Session on Combinatorial Commutative Algebra at the 1093rd meeting of the American Mathematical Society at Temple University, Philadelphia, PA (October).

- 2014:** Gave the invited talk “Base loci of linear systems and almost maximal growth of the Hilbert function” at the Symposium on Projective Algebraic Varieties and Moduli 2014, Seoul National University, Seoul, Korea (February).

Gave the invited talk “On the Weak Lefschetz Property for artinian Gorenstein algebras of codimension 3” in the Special Session on Interactions between Commutative Algebra and Algebraic Geometry, at the 1100th Meeting of the American Mathematical Society, Texas Tech University, Lubbock, TX (April).

Supported by CIRM (Centro internazionale per la ricerca matematica, Trento, Italy) for a two-week research project under their “Research in Pairs” program, with M. Boij, R. Miró-Roig and U. Nagel (July). Hotel and lunch paid by CIRM.

Gave the invited talk “A geometric approach to the Weak Lefschetz Property for height four complete intersections” in the Special Session on Commutative Algebra and its Interactions with Algebraic Geometry, at the 1103rd Meeting of the American Mathematical Society, Dalhousie University, Halifax, Canada (October).

Gave the invited talk “Secant varieties to the varieties of reducible forms” in the Special Session on Commutative Algebra: Interactions with Algebraic Combinatorics, Algebraic Geometry, and Representation Theory at the Annual Meeting of the Canadian Mathematical Society, Hamilton, Canada (December).

2015: Gave the invited talk “The Weak Lefschetz Property and Ideals generated by powers of general linear forms,” at the Mini-Workshop on Ideals of linear spaces, their symbolic powers and Waring problems, Mathematisches Forschungsinstitut Oberwolfach, Germany (February).

Gave the invited talk “The non-Lefschetz locus,” at the Workshop on Lefschetz Properties at the Mathematisches Institut, Georg-August-Universität, Göttingen (March 9, 2015).

2016: Gave the invited talk “Unexpected curves and line arrangements” at the Mini-Workshop on “Arrangements of Subvarieties, and their Applications” at the Mathematisches Forschungsinstitut Oberwolfach, Germany (February-March) (March 1, 2016).

Gave the invited talk “Connections between WLP and geometry, including Hartshorne-Rao modules (and invitation to others to work on these problems)” at the Workshop on “Lefschetz Properties and Artinian Algebras” at the Banff International Research Station (BIRS) (March 14-18) (March 16, 2016).

Gave the invited talk “Line arrangements and configurations of points with an unusual geometric property” in the Special Session on Commutative Algebra and Its Interactions with Combinatorics and Algebraic Geometry at the 1120th Meeting of the American Mathematical Society, North Dakota State University, Fargo, ND (April 16, 2016).

Gave the two invited talks “A survey on the weak (and strong) Lefschetz property” and “Lefschetz properties and moving beyond the SHGH conjecture” at the Research Station on Commutative Algebra, sponsored by the Korea Institute for Advanced Studies, in Yangpyung, Korea (June 14, 2016).

Gave the invited talk “Lefschetz properties and a problem on fat points” at the conference “Algebra and Geometry in Catania – A workshop in honor of Alfio Ragusa’s 70th birthday” at the University of Catania. (September 28, 2016).

2017: Supported by Mathematisches Forschungsinstitut Oberwolfach (Germany) for a two-week research project under their “Research in Pairs” program, with M. Boij, R. Miró-Roig and U. Nagel (March–April, 2017).

I attended the Workshop on Ordinary and Symbolic Powers of Ideals, Casa Matemática Oaxaca, Oaxaca, Mexico (May 14–19, 2017). I gave the invited talk “Lefschetz properties for ideals of powers of linear forms – old and new results.”

I attended the Workshop on Lefschetz Properties in Algebra, Geometry and Combinatorics at the Mittag-Leffler Institute in Stockholm, Sweden (July 10–14, 2017). I gave the invited talk “Results and problems on Lefschetz properties for ideals of powers of linear forms” on July 11, 2017.

2018: I attended the Conference on Algebraic Geometry and its Broader Implications (March 23–25) in celebration of Robin Hartshorne’s 80th and the book’s 40th birthday.

I attended the Workshop on Lefschetz Properties and Jordan Type in Algebra, Geometry and Combinatorics in Levico Terme, Italy (which I co-organized) in June, 2018.

I attended the meeting of the American Mathematical Society in Fayetteville, Arkansas November 3–4, 2018. I gave the invited talk “Unexpected Hypersurfaces” in the Special Session on interactions between Combinatorics and Commutative Algebra (November 3, 2018).

I attended the Winter meeting of the Canadian Mathematical Society in Vancouver, Canada December 8–9, 2018. I gave the invited talk “Unexpected Hypersurfaces” in the Special Session on Symbolic and Regular Powers of Ideals (December 8, 2018).

2019: I gave the undergraduate colloquium “Projective planes” at the Thematic Program in Commutative Algebra and its Interaction with Algebraic Geometry, University of Notre Dame (May 31, 2019).

I gave the talk “Expecting the unexpected” at the Workshop on Lefschetz Properties in Algebra, Geometry and Combinatorics II, Centre International de Rencontres Mathématiques (Luminy), Marseille, France (October 16, 2019).

2020: I was invited to speak at the meeting of the American Mathematical Society in West Lafayette, IN (Purdue University). The meeting would have been held April 4-5, 2020 but was cancelled due to the corona virus. I was invited to speak in two special sessions: The Special Session on Combinatorial Algebra and Geometry, where I planned to give the talk “Unexpected hypersurfaces and when to expect them,” and the Special Session on Combinatorial Techniques in Commutative Algebra, where I planned to give the talk “Schemes supported on the singular locus of a hyperplane arrangement.”

I was invited to speak at the conference “Unexpected and asymptotic properties of projective varieties” at the University of Nebraska, Lincoln, which would have been held May 15-17 but was cancelled due to the corona virus. I would have given the talk “Reaching for the stars ... and beyond.”

2021: I gave the virtual talk “Properties of the singular locus of a hyperplane arrangement” at the Workshop on Logarithmic Vector Fields and Freeness of Divisors and Arrangements: New perspectives and applications. The workshop was sponsored by the Mathematisches Forschungsinstitut Oberwolfach from January 25 to January 29, 2021. (January 27, 2021.)

I gave the virtual 45-minute talk “Unexpected hypersurfaces and when to expect them” (one of only two 45-minute talks) at the Special Session on Commutative Algebra at the Spring Central Sectional Meeting (originally scheduled to be hosted by the University of Cincinnati) of the American Mathematical Society on April 17-18, 2021.

I gave the virtual talk “Schemes associated to hyperplane (and hypersurface) arrangements” in the Special Session on Hyperplane Arrangements in Connection with Commutative Algebra, at the Fall Western Sectional Meeting (originally scheduled to be hosted by the University of New Mexico) of the American Mathematical Society on October 23-24, 2021.

2022: “Projecting to Complete Intersections” (invited virtual talk), Special Session on Combinatorial Algebra and Geometry, at the Central Sectional Meeting of the American Mathematical Society, originally at Purdue University, March 26, 2022.

“The Singular Locus of a Hyperplane Arrangement” (invited virtual talk), Special Session in Combinatorial Techniques in Commutative Algebra, at the Central Sectional Meeting of the American Mathematical Society, originally at Purdue University, March 27, 2022.

Travel to the Stefan Banach International Mathematics Center for a 2-week collaborative workshop with Luca Chiantini (Siena), Giuseppe Favacchio (Palermo), Lucja Farnik (Crakow), Brian Harbourne (Nebraska), Tomasz Szemberg (Crakow) and Justyna Szpond (Crakow). All local expenses were paid by the Banach Center and by Szemberg’s Department of Mathematics. June 5-18, 2022.

I gave the invited talk “A geometric approach to the Weak Lefschetz Property for certain complete intersections” on September 16, 2022 at the INdAM Meeting The Strong and Weak Lefschetz Properties, held at Il Palazzone, Cortona (Italy), September 12-16, 2022.

I participated in the Workshop on Subvarieties in Projective Spaces and their Projections at the Mathematisches Forschungsinstitut Oberwolfach (Germany), November 27 – December 2, 2022.

2023: I participated in the Workshop on Lefschetz Properties in Algebra, Geometry, Topology and Combinatorics, at the Fields Institute (Toronto, May 15-19, 2023. (I co-organized this workshop.)

I gave the invited talk “Star configurations, and their progenitors and descendants” at the Conference on Unexpected and Asymptotic Properties of Algebraic Varieties 2023, held at the University of Nebraska August 11-12, 2023. I attended remotely because of a funeral on August 13.

I attended and co-organized the Special Session on Varieties with Unexpected Hypersurfaces, Geoproc Sets and their Interactions in the 2023 Fall Central Sectional Meeting of the American Mathematical Society at Creighton University, October 7-8, 2023.

2024: 2-week research stay at the University of Catania, visiting Elena Guardo together with Giuseppe Favacchio (Palermo) and Brian Harbourne (Nebraska, via zoom). Local expenses paid by Catania. February 7–22, 2024.

10-day research stay at the University of Siena, visiting Luca Chiantini. Local expenses paid by Siena. February 22 – March 1, 2024.

7-day research stay at the Banff International Research Station (BIRS) together with Mats Boij, Rosa Maria Miró-Roig and Uwe Nagel, under the auspices of their Research in Teams program. Local expenses paid by BIRS. March 24–31, 2024.

I attended the conference “Lefschetz Properties in Algebra, Geometry, Topology and Combinatorics” in Kraków, Poland, June 23–29, 2024. Local expenses were paid by the organizers and I participated in the accompanying workshop.

I gave the invited talk “A brief overview of Uwe Nagel’s work” at the Conference on Commutative Algebra and its Interaction with Algebraic Geometry and Algebraic Combinatorics, University of Notre Dame, August 14, 2024.

2025: 1-week research stay at the Centro Internazionale di Ricerca Matematica (CIRM) at the University of Trento, Italy. Room and lunches were paid by CIRM.

4-day stay at the University of Siena visiting Luca Chiantini (Siena), along with Giuseppe Favacchio (Palermo). Chiantini paid for hotel and meals.

Workshop on Weak and Strong Lefschetz Properties across Mathematics, Sofus Lie Conference Center, Fjordane, Norway, June 2–6, 2025. (I was a participant and co-organizer.)

Invited Addresses – Universities:

1986: Two Lectures, “Curves” Seminar, Queen’s University, Kingston, Canada (June)

Two Lectures, Università di Trento, Italy (July)

Lecture, Algebraic Geometry Seminar, Brown University, Providence (November)

Lecture, Algebra Seminar, University of Pennsylvania, Philadelphia (December).

1987: Colloquium, Villanova University, Villanova (April)

Lecture, Università di Trento, Italy (September)

Two Lectures, Università di Catania, Italy (November)

- 1988:** Two Lectures, Università di Ferrara, Italy (January)
 Lecture, Seminario di Geometria, Università di Milano, Italy (March)
 Two Lectures, Universidad de Barcelona, Spain (April)
 Lecture, Università di Perugia, Italy (May)
 Lecture, Università di Roma, Italy (May)
 Two Lectures, Università di Catania, Italy (May)
 Colloquium, City University of New York (October)
- 1989:** Lecture, Queen's University (January)
- 1990:** Two Lectures, Università di Catania, Italy (May)
 Lecture, Università di Trento, Italy (August)
- 1992:** Colloquium, University of Notre Dame (September)
 Lecture Series (Four 100-minute Lectures), Global Analysis Research Center, Seoul National University, Korea (October)
 Colloquium, Seoul National University, Korea (October)
- 1993:** Colloquium, Queen's University (February)
 Two Lectures, "Curves" Seminar, Queen's University, Kingston, Canada (February and March)
 Lecture, Commutative Algebra Seminar, Michigan State University (March)
 Colloquium, Syracuse University (April)
- 1994:** Colloquium, Florida State University (October)
- 1995:** Lecture, Università di Trento, Italy (June)
- 1997:** Lecture, Algebra Seminar, University of Illinois at Chicago (March)
- 1998:** Lecture, Università di Trento, Italy (May)
 Lecture (2 hours), Nagoya University, Japan (August)
- 1999:** Colloquium, University of Paderborn, Germany (May)
- 2000:** Lecture, Algebraic Geometry Seminar, Università di Genova, Italy (February)
 Lecture, Algebraic Geometry Seminar, Università di Genova, Italy (June)
 Colloquium, Michigan State University (December)
- 2001:** Lecture, Algebraic Geometry Seminar, University of Barcelona (June)
- 2002:** Lecture, Commutative Algebra Seminar, Purdue University (February)
 Colloquium, Utah State University (April)

- 2003:** Lecture, Algebraic Geometry Seminar, University of Barcelona (June)
Lecture at the Research Experience for Undergraduates (REU) program at Grand Valley State University (July)
- 2004:** Lecture, Algebraic Geometry Seminar, Queen's University (September)
- 2005:** Colloquium, University of Kentucky (February)
- 2006:** Lecture, Algebra and Combinatorics Seminar, Texas A&M University (February)
Undergraduate Colloquium, Southeastern Louisiana University (September)
Lecture, Algebra Seminar, Southeastern Louisiana University (September)
- 2008:** Lecture, Algebra Seminar, University of Kentucky (March)
- 2009:** Lecture, Algebra and Geometry Seminar, Università di Genova, Italy (July)
Lecture, Algebra Seminar, Università di Trento, Italy (July)
- 2011:** Seminar talk, Departamento de Matemática, Facultad de Ciencias Exactas y Naturales, Universidad Nacional del Paraguay (October)
Invited lecture for the inauguration of the Coloquio Paraguayo de Matemática y Ciencias Afines and the Escuela de Matemática de Latinoamérica y el Caribe, held at the Sociedad Científica del Paraguay (October)
- 2013:** Seminar talk “La proprietà debole di Lefschetz e le configurazioni di punti di Hesse” (given in Italian), Università di Siena (June 28, 2013)
Seminar talk “Sulla proprietà ‘Weak Lefschetz’ per le algebre Gorenstein artiniane di codimensione 3” (given in English due to non-Italian speakers in the audience), Università di Genova (July 4, 2013)
- 2016:** Seminar talk “Beyond the SHGH conjecture” in the Algebraic Geometry seminar, University of Barcelona (October 7, 2016).
Colloquium talk “Great expectations ... and projective planes” at Michigan Technological University (November 11, 2016).
- 2017:** Algebra seminar talk “Lefschetz properties for ideals of powers of linear forms” at the University of Kentucky (March 1, 2017).

- 2019:** Seminar talk “Unexpected hypersurfaces” at the University of Catania (March 13, 2019).
Seminar talk “Unexpected hypersurfaces in projective space” at the University of Naples (March 19, 2019).
- 2022:** “Los planos proyectivos” (invited virtual talk), Seminario de matemáticas en español, University of Nebraska (Lincoln), April 22, 2022.
- 2023:** “Weak Lefschetz Property for Complete Intersections – Partial Results,” Commutative Algebra Seminar, University of Nebraska (Lincoln), October 4, 2023.
“On the Weak Lefschetz Property for Complete Intersections,” Algebra Seminar, University of Kentucky (Lexington), November 8, 2023.
- 2024:** “On the Weak Lefschetz Property for Complete Intersections,” Algebraic Geometry Seminar, University of Catania, February 9, 2024.
“Geproci sets, Weddle loci and the Weak Lefschetz Property,” joint seminar of the Universities of Siena, Firenze, Bologna and Ferrara, March 1, 2024.