Curriculum Vitae of Lorenzo Robbiano

Last Update: May 13, 2021

Birthdate: October 9, 1944

Academic and Professional Appointments

Assistent Professor: University of Genova 3/69–1/81
Teaching Professor: University of Genova 11/71–1/81
Full Professor: University of Genova 1/81–11/11
Retired: September 2011

Membership in Professional Organizations

Member of the Editorial Board of "Communications in Algebra" 1/86–1/90
Member of the Editorial Board of "J. Symbolic Computation" 3/88– 3/94
Head of the Department of Mathematics (University of Genoa) 11/91–10/94
Member of the Editorial Board of "J. Pure Appl. Algebra" 9/92 – 12/98
Member of the National Committee 01 (Mathematics) of CNR 94 – 98
Member of the National Committee 12 (Computer Science) of CNR 94 – 98
Member of the Administrative Council of the University of Genoa 10/93 – 7/95
Member of the Academic Senate of the University of Genoa 9/95 – 98
Coordinator of the Scientific Area of Mathematics 11/98– 11/99
Head of the Department of Mathematics (University of Genoa) 11/04–10/11
Coordinator of the Heads of the Departments 11/05–11/08
Member of the scientific advisory board of RICAM 11/08 – 3/12

Organizations of Congresses, Workshops

Commutative Algebra - Genova (Italy) 5/85
Commutative and Computer Algebra - Genova (Italy) 5/86
Gröbner Bases - Cornell, Ithaca NY (US) 10/88
Commutative and Computer Algebra II -Genova (Italy) 6/89
Computing in Algebraic Geometry - Cortona (Italy) 6/91
Commutative and Computer Algebra III - Cortona (Italy) 6/93
Hilbert Functions and related topics - Cornell, Ithaca NY (US) 10/93
Commutative and Computer Algebra IV - Genova (Italy) 5/95
Commutative and Computer Algebra V - Herstmonceux (England) 6/97
Commutative and Computer Algebra VI - Torino (Italy) 6/99
International School on Computer Algebra - Torino (Italy) 6/99
Commutative and Computer Algebra VII - Kingston (Canada) 6/01
International School on Computer Algebra - Kingston (Canada) 6/01
Zero dimensional schemes (in honour of Geramita) - Acireale (Italy) 6/02
Commutative and Computer Algebra VIII - Cadiz (Spain) 6/03
International School on Computer Algebra - Porto Conte (Italy) 5/05
Approximate Commutative Algebra - Linz (Austria) 2/06
International School on Computer Algebra - Linz (Austria) 6/07
Workshop on Approximate Commutative Algebra - Linz (Austria) 6/08
International School on Computer Algebra - Barcelona (Spain) 6/09
International School on Computer Algebra - Passau (Germany) 6/11
International School on Computer Algebra - Osnabrück (Germany) 6/13
International School on Computer Algebra - Gandhinagar (India) 2/16
International School on Computer Algebra - Hue (Iran) 3/20

Scientific Books

Computational Commutative Algebra 1 (with M. Kreuzer), Springer 2000

Computational Commutative Algebra 2 (with M. Kreuzer), Springer 2005

Algebra Lineare per tutti, Springer 2007

Linear Algebra for everyone, Springer 2010,
translation in English of the preceding book, done by Anthony Geramita.

Álgebra Linear para todos, Springer 2011,
translation in Portuguese of the same book, done by Taìse Santiago O. Mozzato

Matematica di base (with Anna Maria Bigatti), CEA 2014

Computational Linear and Commutative Algebra (with M. Kreuzer), Springer 2016

Editor

Computational Aspects of Commutative Algebra. Edited by Lorenzo Robbiano, Academic Press 1989

Computational Algebraic Geometry and Commutative Algebra (Cortona 91). Edited by David Eisenbud and Lorenzo Robbiano, Symposia Mathematica XXXIV, Cambridge University Press 1993

Approximate Commutative Algebra. Edited by Lorenzo Robbiano and John Abbott, Springer Verlag 2009

Projects

Team leader of the project CoCoA**.**

Seminars outside Genova in this millennium.

Year 2000: Napoli, Amsterdam, Barcelona (Spain), Zürich (Swizerland), Brasilia (Brasil), Mentone (France).
Year 2001: Torino, Nice (France).
Year 2002: Recife (Brasil), Torino, Pisa, London (Canada), Beijing (China), Sinaia (Romania).
Year 2003: Menton (France), Berkeley (USA), Dortmund (Germany).
Year 2004: Recife (Summer School)(Brasil), Chisinau (Moldova), Dortmund (Germany), Torino.
Year 2005: Zanjan (CIMPA School) (Iran), Dortmund (Germany), Savona.
Year 2006: Linz (Austria), Lund (Sweden), Brenna (Poland).
Year 2007: Bangalore (School) (India), Linz (Austria), Cortona, Sestri Levante.
Year 2008: Mumbai (India), Bangalore (India), Catania, Hong Kong, Linz (Austria), Torino.
Year 2009: Torino (corso di eccellenza Dottorato Politecnico), St. Petersburg (Russia), Olinda (Brasil), Salvador (Brasil), Messina, Passau (Germany).
Year 2010: Castro-Urdiales (Spagna) (congress Recio), Trieste (Convegno Valla), Bangalore (India).
Year 2011: Passau (Course) (Germany), Linz (Austria), Torino.
Year 2012: Passau, Accademia Ligure, Torino (Convegno Conte), Rio de Janeiro (Brasil), Torino, Trento, Kingston (Canada), Brescia.
Year 2013: Osnabrück (COCOA Course), Passau.
Year 2014: Siena
Year 2016: Guwahati (India), Gandhinagar (COCOA Course) India, Catania.
Year 2017: UFF (Brasil), UFRJ (Brasil), So Carlos (Brasil), Passau (Germany)
Year 2018: San Pietroburgo (Russia), Santiago de Compostela (Spain), Genova (Beltrametti 70), Passau (Germany)
Year 2019: Beijing (China), Passau (Germany), Bergamo (Rotary Club)

Papers and books printed in this millennium.

References

[1] M. Kreuzer, L. N. Long, L. Robbiano, *Cotangent Spaces and Separating Re-Embeddings*, To appear on L. Algebra Appl (2021)

[2] A.M. Bigatti, L. Robbiano, *Saturations of Subalgebras, SAGBI Bases, and U-invariants*, `arxiv:1909.10901v2` To appear on J. Symbolic Comput. (2020)

[3] M. Kreuzer, L. N. Long, L. Robbiano, *Algorithms for Zero-Dimensional Complete Intersections*, `arxiv:1903.09563` To appear on J. Commut. Algebra.

[4] J. Abbott, A.M. Bigatti, L. Robbiano, *Ideals modulo a prime*, J. Algebra Appl. Vol 30 (3), (2021).

[5] M. Kreuzer, L. N. Long, L. Robbiano, *Computing subschemes of the border basis scheme*, Internat. J. Algebra Comput. Vol 30, N 8, pp. 1671–1716 (2020)

[6] E. Dimitrova, Q. He, L. Robbiano, B. Stigler, *Small Gröbner Fans of Ideals of Points*, J. Algebra Appl. Vol 19.5, pp. 1-20 (2020)

[7] J. Abbott, A.M. Bigatti, E. Palezzato, L. Robbiano, *Computing and Using Minimal Polynomials*, J. Symbolic Comput. Vol 100, pp 137–163, (2020)

[8] M. Kreuzer, L. N. Long, L. Robbiano, *On the Cayley-Bacharach Property*, Comm. Algebra Vol 47, pp. 328–354 (2019)

[9] —- J. Abbott, A.M. Bigatti L. Robbiano, *Implicitizations of Hypersurfaces*, J. Symbolic Comput. Vol 81, pp 20–40 (2017).

[10] M. Kreuzer and L. Robbiano, **Computational Linear and Commutative Algebra**, Springer, Heidelberg (2016).

[11] L. Robbiano, *Hyperplane Sections, Gröbner Bases, and Hough Transforms*, J. Pure Appl. Algebra, Vol 219, pp 2434–2448 (2015).

[12] L. Robbiano and M.L. Torrente, *Zero-Dimensional Families of Polynomial Systems* , Le Matematiche Vol 68, pp 137–164 (2013).

[13] —- M.C. Beltrametti and L. Robbiano *An algebraic approach to Hough transforms*, J. Algebra Vol 371, pp 669–681(2012)

[14] M. Kreuzer and L. Robbiano, *The Geometry of Border Bases*, JPAA (215), pp 2005–2018 (2011).

[15] A. Bigatti, M. Caboara, L. Robbiano, *Computing Inhomogeneous Gröbner Bases*, J. Symb. Comput. Vol 46, pp 498–510 (2011).

[16] M. Kreuzer, H. Poulisse and L. Robbiano, *From Oil Fields to Hilbert Schemes*, in: L. Robbiano and J. Abbott (eds.), *Approximate Commutative Algebra*, Text and Monographs in Symbolic Computation, Springer-Verlag Wien, pp 1–54 (2009).

[17] —- L. Robbiano, *Giacimenti petroliferi e modelli polinomiali*, Lettera Matematica Pristem Vol 70/71, pp 82–87 (2009).

[18] —- L. Robbiano, *On border basis and Gröbner basis schemes*, Coll. Math. Vol 60, pp 11–25 (2009).

[19] M. Kreuzer and L. Robbiano, *Deformations of border bases*, Coll. Math. Vol 59, pp 275–297 (2008).

[20] J. Abbott, M. Kreuzer, L. Robbiano *Computing zero-dimensional Schemes*, J. Symb. Comput. Vol 39, pp 31–49 (2005).

[21] A. Bigatti, A. Conca, and L. Robbiano, *Generic Initial Ideals and Distractions*, Comm. Algebra Vol 33(6), pp 1709–1732 (2005).

[22] M. Kreuzer and L. Robbiano, **Computational Commutative Algebra 2**, Springer, Heidelberg (2005).

[23] M. Caboara, M. Kreuzer and L. Robbiano, *Efficiently Computing Minimal Sets of Critical Pairs*, J. Symb. Comput. Vol 38, pp 1169–1190 (2004).

[24] M. Caboara and L. Robbiano *Families of Estimable Terms*, Proc. ISSAC '01, pp 56–63 (2001).

[25] M. Kreuzer and L. Robbiano, **Computational Commutative Algebra 1**, Springer, Heidelberg (2000).

Genova May 13, 2021

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