

CURRICULUM VITAE MARGHERITA LELLI-CHIESA

Part I – General Information.

Full Name: Margherita Lelli-Chiesa

Place of Birth: Pescara (PE), Italy

Date of birth: 16/02/1986

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Spoken Languages: Italian, English, German.

Part II – Research Interests.

Research Area: Algebraic Geometry.

Key Words: moduli spaces of algebraic curves, Brill-Noether theory, moduli spaces of vector bundles on projective surfaces, $K3$ surfaces, Hyperkähler manifolds

Part III – Education.

- September 2004–July 2007: Bachelor Program in Mathematics, Università degli Studi di Roma “La Sapienza”. Grade: 110/110 cum laude.
- March 2008–August 2008: Erasmus Exchange Program, Universität Heidelberg.
- September 2007–July 2009: Master Program in Mathematics, Università degli Studi di Roma “La Sapienza”. Grade: 110/110 cum laude.
- October 2009–September 2012: Ph.D., Humboldt Universität zu Berlin; supported by BMS (Berlin Mathematical School). Grade: Summa cum Laude.
Thesis: Gieseker-Petri divisors and Brill-Noether theory of $K3$ -sections
Advisor: Gavril Farkas

Part IV – Appointments.

IV A – Academic Appointments.

- 1 September 2017– : Università degli Studi dell’Aquila, Researcher Type B.
- 4 January 2016–31 August 2017 (in parental leave since April 2016): Università degli Studi di Pisa, Researcher Type A.
- 1 October 2015–31 December 2015: Università degli Studi di Roma Tre, Post-doctoral fellow.
- 1 October 2013–30 September 2015: Centro di Ricerca Matematica Ennio De Giorgi, SNS Pisa, Post-doctoral fellow.
- 1 October 2012–30 September 2013: Max Planck Institute for Mathematics Bonn, Post-doctoral fellow.

IV B – Other Appointments.

- January 2015–February 2015: Invited Participant in the concentration period “Moduli Spaces and Derived Categories” within the Warwick EPSRC Symposium 2014–2015, Warwick.
- January 2014–March 2014: Participant and organizer of some activities within the Junior Trimester Program “Algebraic Geometry”, Hausdorff Center for Mathematics, Bonn.
- May–June 2011: Invited Affiliated Participant in the Program “Moduli Spaces”, Isaac Newton Institute, Cambridge UK.

Part V – Teaching Experience.

- March 2017–May 2017: Course “Geometria 2”, Università degli Studi di Pisa, annual course held jointly with Prof. F. Broglia.
- February 2017–May 2017: Course “Geometria I” (for physicists), Università degli Studi di Pisa, annual course held jointly with Prof. M. Salvetti.
- February 2016–March 2016: Course “Matematica per Scienze Geologiche e per Scienze Naturali e Ambientali”, Università degli Studi di Pisa, held jointly with Prof. M. Abate.
- February 2016–March 2016: Exercise classes of the course “Geometria I” (for physicists), Università degli Studi di Pisa.
- September 2015–December 2015: Exercise classes of the course “Mathematics 2” at the Faculty of Economics and Business of Luiss (Libera Università Internazionale degli Studi Sociali “Guido Carli” di Roma);
- February 2015–May 2015: Course “Geometria delle varietà algebriche”, Scuola Normale Superiore di Pisa, held jointly with Prof. A. Vistoli.
- 2008–2009: Exercise classes of the course “Geometria” at the Faculty of Engineering of Università degli Studi di Roma “La Sapienza”.

Part VI – Awards and Honors.

- 2015: “Premio Mario Baldassarri” awarded by Unione Matematica Italiana to a young mathematician for a relevant contribution in algebra, geometry or number theory.
Awarded paper: M. Lelli-Chiesa, *Generalized Lazarsfeld-Mukai bundles and a conjecture of Donagi and Morrison*, with an Appendix joint with A. L. Knutsen, *Advances in Mathematics* **268** (2015), 529–563.
- 2012: Certificate of Distinction, BMS (Berlin Mathematical School).
- October 2009–September 2012: BMS Fellowship.
- September 2007–July 2009: National fellowship for students enrolled in a Master Program in Mathematics, INdAM (Istituto Nazionale di Alta Matematica).
- December 2006: Fellowship for the best student of the second year of the Bachelor Program in Mathematics, Università di Roma “La Sapienza”, Department of Mathematics.
- December 2005: Fellowship for the best student of the first year of the Bachelor Program in Mathematics, Università di Roma “La Sapienza”, Department of Mathematics.

Part VII – Funding Information.

VII A – Grants.

- January 2014–March 2014: Principal Investigator (PI) of the research group “Brill-Noether methods in the study of Hyperkähler and Calabi-Yau Manifolds” within the Junior Trimester Program “Algebraic Geometry”, Hausdorff Center for Mathematics, Bonn.
Other investigators: F. Gounelas, G. Mongardi, G. Saccà.
Grant Value: 5000 Euros.
Organized activities: three mini courses (held by Enrico Arbarello, Andreas Leopold Knutsen and Edoardo Sernesi) and a workshop.
- February 2012: Member of the BMS delegation successfully asking for extension of DFG (Deutsche Forschungsgemeinschaft) funding.
- 2009–2012: Investigator (I) of the research group SFB 647 (Sonderforschungsbereich 647 “Raum-Zeit-Materie. Analytische und Geometrische Strukturen”). Funded by the DFG.

VII B – Other organization activities.

- December 2015: co-organizer of “Algebraic Geometry and Representation Theory in Rome”, Roma.
- December 2011: co-organizer of “Incontro natalizio di algebra e geometria”, Roma.
- July 2011: local co-organizer of “GAEL XIX”, Berlin.

Part VIII – Publications and Preprints.

- (1) M. Lelli-Chiesa, *Gieseker-Petri divisors and Brill-Noether theory of K3-sections*, Ph.D. thesis, available at <http://edoc.hu-berlin.de/dissertationen/lelli-chiesa-margherita-2012-09-20/PDF/lelli-chiesa.pdf>
- (2) M. Lelli-Chiesa, *The Gieseker-Petri divisor in \mathcal{M}_g for $g \leq 13$* , *Geometriae Dedicata* **158** (2012), 149-165.
- (3) M. Lelli-Chiesa, *Stability of rank-3 Lazarsfeld-Mukai bundles on K3 surfaces*, *Proceedings of the London Mathematical Society* **107** (2013), 451–479.
- (4) M. Lelli-Chiesa, *Green’s Conjecture for curves on rational surfaces with an anticanonical pencil*, *Mathematische Zeitschrift* **275** (2013), 899–910.
- (5) M. Lelli-Chiesa, *Generalized Lazarsfeld-Mukai bundles and a conjecture of Donagi and Morrison*, with an Appendix joint with A. L. Knutsen, *Advances in Mathematics* **268** (2015), 529–563.
- (6) A. L. Knutsen, M. Lelli-Chiesa, G. Mongardi, *Severi Varieties and Brill-Noether theory of curves on abelian surfaces*, *Journal für die reine und angewandte Mathematik*, published online ahead of print in August 2016, DOI: 10.1515/crelle-2016-0029.
- (7) A. L. Knutsen, M. Lelli-Chiesa, G. Mongardi, *Wall divisors and algebraically coisotropic subvarieties of irreducible holomorphic symplectic manifolds*, to appear in *Transactions of the American Mathematical Society*, available at [arXiv:1507.06891](https://arxiv.org/abs/1507.06891).
- (8) M. Lelli-Chiesa, *Curves on surfaces with trivial canonical bundle*, *Bollettino dell’Unione Matematica Italiana*, April 2017, DOI: 10.1007/s40574-017-0126-0.
- (9) A. L. Knutsen, M. Lelli-Chiesa, S. Verra, *Half Nikulin surfaces and moduli of Prym curves*, available at [arXiv:1708.07339](https://arxiv.org/abs/1708.07339).

Part X – Invited Talks.

- August 2016, ICTP, Trieste. “Workshop on Moduli Spaces, Mirror Symmetry and Enumerative Geometry”.
- February 2016, KU Leuven. Seminar talk.
- January 2016, Université de Poitiers. Seminar talk.
- January 2016, Università degli Studi di Roma “Tor Vergata”. Workshop “Birational Geometry of Surfaces”.
- October 2015, Università degli Studi di Roma Tre. Seminar talk.
- September 2015, ETH Zürich. Seminar talk.
- September 2015, Siena. Short seminar talk within “XX Congresso dell’Unione Matematica Italiana”.
- March 2015, Università di Pisa. Seminar talk.
- February 2015, Università di Torino. “Miniworkshop in Algebraic Geometry in Torino”.
- January 2015, University of Warwick. Seminar talk.
- December 2014, Università degli Studi di Roma “La Sapienza”. Seminar talk.
- November 2014, Università degli Studi di Pavia. Seminar talk.
- November 2014, Università degli Studi di Milano. Seminar talk.
- July 2014, Mathematisches Forschungsinstitut Oberwolfach. Young participant’s presentation within “Classical Algebraic Geometry” meeting.
- May 2014, Berlin. “Moduli and Automorphic Forms: a Meeting for Young Women in Mathematics”.
- May 2014, Università degli Studi di Milano. “Workshop on Syzygies and moduli of curves”.
- March 2014, Pisa. Colloquium talk within “Mathematicians’ Day”.
- November 2013, Scuola Normale Superiore di Pisa. Seminar talk.
- November 2013, Università degli Studi di Roma “Tor Vergata”. “Workshop on Severi Varieties and Hyperkähler Manifolds”.
- June 2013, SISSA, Trieste. Contributed talk within “VBAC 2013 (Vector Bundles on Algebraic Curves)”.
- March 2013, Université Lille 1. Seminar talk.

- February 2013, Université Paris VI “Pierre et Marie Curie”. Seminar talk.
- December 2012, Università degli Studi di Milano. “Workshop of Algebraic Geometry - Seminario di Natale 2012”.
- November 2012, “Max Planck Institute for Mathematics”, Bonn. Seminar talk.
- October 2012, Levico. “Progressi Recenti in Geometria Reale e Complessa”.
- July 2012, Università degli Studi di Roma “La Sapienza”. Seminar talk.
- June 2012, Mathematisches Forschungsinstitut Oberwolfach. Young participant’s presentation within “Classical Algebraic Geometry” meeting.
- May 2012, Hamburg. “NoGAGS (North German Algebraic Geometry Seminar)”
- May 2012, Pisa. “Giornate di Geometria Algebrica ed Argomenti Correlati IX”.
- December 2011, Università degli Studi di Roma “La Sapienza”. “Incontro natalizio di algebra e geometria”.
- November 2011, Università degli Studi di Roma Tre. Seminar talk.
- March 2011, Università di Trento. Seminar talk.
- February 2011, Berlin. Colloquium talk within “BMS Days”.
- December 2010, Humboldt Universität zu Berlin. Seminar talk.
- June 2010, Mathematisches Forschungsinstitut Oberwolfach. Young participant’s presentation within “Classical Algebraic Geometry” meeting.

Part X – Presentation of scientific posters.

- “Stability of rank-3 Lazarsfeld-Mukai bundles on arbitrary K3 surfaces”, poster session within “A Celebration of Algebraic Geometry”, Cambridge Massachusetts, August 2011.
- “The Gieseker-Petri divisor in \mathcal{M}_g ”, poster session within “School on Moduli Spaces”, Isaac Newton Institute, Cambridge UK, January 2011.

Part XI – Conferences Attended.

- “Modern Algebra and Classical Geometry”, Trento, June 2017.
- “Workshop on Moduli Spaces, Mirror Symmetry and Enumerative Geometry”, ICTP, Trieste, August 2016.
- Workshop “Birational Geometry of Surfaces”, Università degli Studi di Roma “Tor Vergata”, January 2016.
- “Geometry of algebraic varieties”, Berlin, October 2015.
- “XX Congresso dell’Unione Matematica Italiana”, Siena, September 2015.
- “Heidelberg Laureate Forum”, Heidelberg, August 2015.
- “Algebraic varieties and their moduli”, Pisa, May-June 2015.
- “Miniworkshop in Algebraic Geometry in Torino”, Torino, February 2015.
- “Classical Algebraic Geometry”, Mathematisches Forschungsinstitut Oberwolfach, July 2014.
- “Moduli and Automorphic Forms: a Meeting for Young Women in Mathematics”, Berlin, May 2014.
- “Workshop on Syzygies and moduli of curves”, Università degli Studi di Milano, May 2014.
- “Fundamental Groups in Arithmetic and Algebraic Geometry”, Pisa, December 2013.
- “Workshop on Severi Varieties and Hyperkähler Manifolds”, Roma, November 2013.
- “Classification of Algebraic Varieties and related topics”, Cetraro, September 2013.
- “Conformal Blocks, Vector Bundles on curves and Moduli of curves”, Roma, September 2013.
- “VBAC 2013”, SISSA, Trieste, June 2013.
- “Winter School on the Geometry of Sheaves in Low Dimensions”, Ascona, January 2013.
- “Workshop of Algebraic Geometry - Seminario di Natale 2012”, Milano, December 2012.
- “Progressi Recenti in Geometria Reale e Complessa”, Levico, October 2012.

- “Algebraic and complex geometry”, on the occasion of Klaus Hulek’s 60th Birthday, Hannover, September 2012.
- “Classical Algebraic Geometry”, Mathematisches Forschungsinstitut Oberwolfach, June 2012.
- “Giornate di Geometria Algebrica ed Argomenti Correlati IX”, Pisa, May 2012.
- “NoGAGS”, Universität Hamburg, May 2012.
- “Incontro natalizio di algebra e geometria”, Roma, December 2011.
- “Complex Algebraic Geometry”, Mathematisches Forschungsinstitut Oberwolfach, September 2011.
- “A Celebration of Algebraic Geometry”, Cambridge Massachusetts, August 2011.
- “GAEL XIX”, Berlin, July 2011.
- “VBAC 2011”, Isaac Newton Institute, Cambridge UK, June 2011.
- “NoGAGS”, HU Berlin, May 2011.
- “Classical Algebraic Geometry”, INdAM, Roma, February 2011.
- “School on Moduli Spaces”, Isaac Newton Institute, Cambridge UK, January 2011.
- “Intersection Theory on the Moduli Space of Curves”, Berlin, October 2010.
- “Young Researchers in Arithmetic and Algebraic Geometry, Mainz, October 2011.
- “Workshop in Deformation Theory II”, Roma, September 2010.
- “Workshop on Elliptic Fibrations and K3 Surfaces”, Berlin, July 2010.
- “Classical Algebraic Geometry”, Mathematisches Forschungsinstitut Oberwolfach, June 2010.
- “NoGAGS”, Hannover, June 2010.
- “GAEL XVIII”, Coimbra, June 2010.
- “Moduli Spaces in Algebraic Geometry”, Mathematisches Forschungsinstitut Oberwolfach, January 2010.
- “NoGAGS”, FU Berlin, November 2009.
- “Complex Algebraic Geometry”, on the occasion of H. Kurke’s 70th birthday, Berlin, October 2009.
- “Moduli”, Berlin, August 2009.

Part XII – Other Services to the Scientific Community.

- 2014: Interviewee for the exhibition MaTeinItaly within the Triennale di Milano.
- Referee for *Journal of Pure and Applied Algebra*, *International Mathematics Research Notices*, *Algebraic Geometry*, *Lecture Notes in Mathematics*.
- 2009–2010: BMS Student Representative.