# UNIVERSITÀ DEGLI STUDI DI MILANO

*Curriculum vitae*

**AL MAGNIFICO RETTORE**
**DELL'UNIVERSITA' DEGLI STUDI DI MILANO**                    **COD. ID: 4819**

Il sottoscritto chiede di essere ammesso a partecipare alla selezione pubblica, per titoli ed esami, per il conferimento di un assegno di ricerca presso il Dipartimento di __Matematica_____

Responsabile scientifico: _Prof. Van Geemen_____

**[Laura Pertusi]**

**CURRICULUM VITAE**

INFORMAZIONI PERSONALI

| Cognome | Pertusi |
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| Nome | Laura |
| Data Di Nascita | 15/12/1990 |

OCCUPAZIONE ATTUALE

| Incarico | Struttura |
|---|---|
| Assegnista | Dipartimento di Matematica F. Enriques, Università degli studi di Milano |

ISTRUZIONE E FORMAZIONE

| Titolo | Corso di studi | Università | anno conseguimento titolo |
|---|---|---|---|
| Laurea Magistrale o equivalente | Matematica | Università degli studi di Torino | 2014 |
| Specializzazione | | | |
| Dottorato Di Ricerca | Matematica | Università degli studi di Milano | 2018 |
| Master | Matematica (M2 Analyse, Arithmétiques et Géométrie) | Université de Paris Sud 11 | 2015 |
| Diploma Di Specializzazione Medica | | | |
| Diploma Di Specializzazione Europea | | | |
| Altro | | | |

ISCRIZIONE AD ORDINI PROFESSIONALI

| Data iscrizione | Ordine | Città |
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## LINGUE STRANIERE CONOSCIUTE

| lingue | livello di conoscenza |
|---|---|
| Inglese | C1, certificazione: FIRST B2 |
| Francese | C1, certificazione: DELF B1 |

## PREMI, RICONOSCIMENTI E BORSE DI STUDIO

| anno | Descrizione premio |
|---|---|
| 2020 | Premio INdAM-SIMAI-UMI per tesi di dottorato in Matematica |
| 2019 | Premio Cuozzo per tesi di dottorato in Matematica |
| 2018 | Borsa di studio per un visiting di 5 mesi al Max Planck Institute of Mathematics, Bonn. |
| 2018 | Borsa di studio per partecipare ad una conferenza a MSRI, Berkeley. |
| 2014 | Borsa di studio per Master 2 a Parigi. |

## ATTIVITÀ DI FORMAZIONE O DI RICERCA

**Research interests:**

Complex algebraic geometry. In particular, derived categories of coherent sheaves, cubic fourfolds, Gushel-Mukai varieties, stability conditions on triangulated categories, irreducible holomorphic symplectic varieties.

**Employment:**

**March 2019-present**: Post-Doc, Università degli Studi di Milano. Mentor: prof. Paolo Stellari.

**October-December 2018:** Postdoctoral Research Associate, University of Edinburgh. Mentor: prof. Arend Bayer.

**October 2015-September 2018:** PhD Student, Università degli Studi di Milano. Advisor: prof. Paolo Stellari.

**Visiting positions:**

**December 9-14, 2019:** Department of Mathematics, University of Warwick, invited by C. Li.

**September 14-21, 2019:** School of Mathematics, Uniersity of Edinburgh, invited by A. Bayer.

**March-July 2019:** Max Planck Institute for Mathematics, Bonn, invited by D. Huybrechts.

**January 30-February 13, 2019:** MSRI in Berkeley, California, and Department of Mathematics University of California, Santa Barbara, invited by X. Zhao.

**September 10-20, 2018:** Department of Mathematics University of California, Santa Barbara, invited by X. Zhao.

**April 11-27, 2018:** Department of Mathematics Northeastern University, Boston, invited by X. Zhao.

**October 2017:** Department of Mathematics Northeastern University, Boston, invited by E. Macrì.

**May 31-June 17, 2017:** Institut Henri Poincaré, Paris, invited by E. Macrì.

## ATTIVITÀ PROGETTUALE

| Anno | Progetto |
|---|---|
| 2015-2018 | Ph.D. Thesis: Geometry of fourfolds with an admissible K3 subcategory. |

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| 2020-present | Moduli spaces of stable objects on Enriques categories, in progress, joint with Alex Perry and Xiaolei Zhao. |
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| 2020-present | Deformation theory and formality conjecture on K3 categories, in progress, joint with Huachen Chen and Xiaolei Zhao. |
| 2020-present | S-invariant stability conditions on cubic threefolds, in progress, joint with Soheyla Feyzbakhsh. |
| 2020-present | Singular symplectic varieties and Prym varieties, in progress, joint with Emma Brakkee, Chiara Camere, Annalisa Grossi, Giulia Saccà, Alexandra Viktorova. |
| 2021-present | Strange duality and O'Grady 10, in progress, joint with Huachen Chen and Xiaolei Zhao. |

## TITOLARITÀ DI BREVETTI

| Brevetto |
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## CONGRESSI, CONVEGNI E SEMINARI

### SEMINARI SU INVITO

| Data | Titolo | Sede |
|---|---|---|
| October 28, 2020 | *Elliptic quintics on cubic fourfolds, O'Grady 10, and Lagrangian fibrations* | Algebraic Geometry and Arithmetic Seminar, Università di Pisa, online seminar. |
| October 10-11, 2020 | *Elliptic quintics on cubic fourfolds, O'Grady 10, and Lagrangian fibrations* | AMS Fall 2020 Southeast virtual meeting. |
| July 12-18, 2020 | *Elliptic quintics on cubic fourfolds, O'Grady 10, and Lagrangian fibrations* | Conference Moduli spaces, Birational Geometry and Derived Aspects, Oberwolfach, Germany. |
| May 15, 2020 | *Stability conditions and moduli spaces for Kuznetsov components of Gushel-Mukai varieties* | Algebraic Geometry Seminar, Imperial College, London, online seminar. |
| April 29, 2020 | *Stability conditions and moduli spaces for Kuznetsov components of Gushel-Mukai varieties* | Algebraic Geometry Seminar, Sapienza Università di Roma, online seminar. |
| April 23, 2020 | *Marked and labelled Gushel-Mukai fourfolds* | Algebraic Geometry Seminar, Università degli studi di Milano, online seminar. |
| February 28, 2020 | *Gushel-Mukai fourfolds and stability conditions* | Algebraic Geometry Seminar, Università di Roma Tor Vergata. |
| January 20-24, 2020 | *Gushel-Mukai varieties and stability conditions* | Algebraic Geometry and Moduli Seminar, University of Zurich, Switzerland. |
| December 20, 2019 | *The K3 category of cubic fourfolds and Gushel-Mukai fourfolds* | Università di Roma Tor Vergata, Italy. |
| September 26-27, 2019 | *Stability conditions on Gushel-Mukai fourfolds* | Conference "Genova-Torino-Milano Seminar", Genova, Italy. |
| September 9-13, 2019 | *Stability conditions on Gushel-Mukai fourfolds* | Conference "The Geometry of Derived Categories", University of Liverpool, UK. |

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| June 24-28, 2019 | *Elliptic quintics on cubic fourfolds and O'Grady spaces* | Workshop on Derived Categories, Moduli Spaces and Deformation Theory, Cetraro, Italy. |
|---|---|---|
| June 3-7, 2019 | *Elliptic quintics on cubic fourfolds and stability conditions* | Japanese-European Symposium on Symplectic Varieties and Moduli spaces, Zurich, Switzerland. |
| May 1-3, 2019 | *Elliptic quintics on cubic fourfolds and stability conditions* | Fourth Meeting for Young Women in Mathematics "Cohomological Methods in Geometry", University of Freiburg, Germany. |
| April 25, 2019 | *On the double EPW sextic associated to a Gushel-Mukai fourfold* | Algebraic Geometry Seminar, University of Strasbourg, France. |
| April 9, 2019 | *The noncommutative K3 surface of a cubic fourfold and hyperkaehler geometry* | Seminar on Algebra, Geometry and Physics, Max-Planck Institute for Mathematics, Bonn, Germany. |
| March 28, 2019 | *Stability conditions and the geometry of Fano varieties* | Oberseminar, Max-Planck Institute for Mathematics, Bonn, Germany. |
| March 18-20, 2019 | *Rational curves of low degree on cubic fourfolds and stability conditions* | Workshop on Mirror Symmetry and Stability Conditions, Harvard University, Boston, USA. |
| March 15, 2019 | *Twisted cubics on cubic fourfolds and stability conditions* | Algebraic Geometry Seminar, University of Angers, France. |
| December 21, 2018 | *Cubic fourfolds and Categorical Torelli Theorem* | Welcome Home, Dipartimento di Matematica, Università degli Studi di Torino, Italy. |
| November 22, 2018 | *Rational curves of low degree on cubic fourfolds and stability conditions* | Algebraic Geometry Seminar, ENS, Paris, France. |
| October 16, 2018 | *Geometry of fourfolds with an admissible K3 subcategory* | EDGE Seminar, School of Mathematics, Edinburgh, UK. |
| September 21, 2018 | *Geometry of fourfolds with an admissible K3 subcategory* | Columbia Algebraic Geometry Seminar, Columbia University, New York, USA. |
| July 6, 2018 | *An introduction to the categorical Torelli Theorem for cubic fourfolds* | PhD Day, Dipartimento di Matematica, Università degli Studi di Milano, Italy. |
| July 2, 2018 | *Twisted cubics on cubic fourfolds and stability conditions* | Institut of Mathematics, University of Mainz, Germany. |
| June 18-22, 2018 | *Rational curves of low degree on cubic fourfolds and stability conditions* | GaeL XXVI, Strasbourg, France. |
| April 21-22, 2018 | *Rational curves of low degree on cubic fourfolds and stability conditions* | AMS Sectional Meeting – Section Geometry of Moduli Spaces, Northeastern University, Boston, USA. |
| February 20, 2018 | *Classical and noncommutative Voevodsky's conjecture for cubic fourfolds and Gushel-Mukai fourfolds* | EPFL Topology Seminar, Lausanne, Switzerland. |
| December 19, 2017 | *Twisted cubics on cubic fourfolds and stability conditions* | Seminari di Natale, Dipartimento di Matematica, Università degl Studi di Milano, Italy. |
| October 5, 2017 | *On the double EPW sextic associated to a Gushel-Mukai fourfold* | GPRT Seminar, Northeastern University, Boston, USA. |
| March 27, 2017 | *Fourier-Mukai partners for general special cubic fourfolds* | MAGIC seminar, Imperial College, London, UK. |
| July 21, 2016 | *Special cubic fourfolds and Fourier-Mukai partners* | Milano Junior Seminars in Algebraic Geometry, Dipartimento di Matematica, Università degl Studi di Milano, Italy |

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| September 30, 2015 | *Holomorphic symplectic manifolds and cone conjecture* | Algebraic Geometry Seminars, Dipartimento di Matematica, Università degli Studi di Torino, Italy. |
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| August 2-14, 2015 | *Introduction to the Birational Geometry of Hyperkaehler Manifolds* | Summer Course Moduli Spaces and Derived Categories, Palazzone in Cortona, Italy. |
| December 13-17, 2021 (upcoming) | | Conference "Geometry and Arithmetic of varieties with trivial canonical bundle", Oslo. |
| April 27-30, 2021 (upcoming) | | Giornate di Geometria Algebrica e Argomenti Correlati XV, Palazzo Feltrinelli, Gargnano, Italy. |
| February 12, 2021(upcoming) | | Algebraic Geometry Seminar Jussieu, online seminar. |
| February 2, 2021(upcoming) | | Derived Seminar, zoom seminar. |

MINI-CORSI IN SCUOLE

| Data | Titolo | Sede |
|---|---|---|
| December 14-15, 2020 | Two hours online mini-course on "Bridgeland stability conditions and Kuznetsov components of Fano threefolds and fourfolds". | Mini-school on "Moduli of sheaves on three- and four-folds", organized by Justin Sawon, University of North Carolina at Chapel Hill. |
| June 5-12, 2022 (upcoming) | Mini-course about examples and applications, beside the main courses of Enrico Arbarello and Giulia Saccà. | School on "Stability conditions", organized by Gilberto Bini, Claudio Fontanari (CIRM), Università di Trento. |

SEMINARI IN READING SEMINARS

| Data | Titolo | Sede |
|---|---|---|
| January 10, 2020 | *Riemann-Hilbert correspondence* | Reading Seminars on *"D-modules and mixed Hodge modules"*, University of Milano. |
| May 16, 2019 | *Applications to enumerative geometry* | Reading Seminars on *"Gromov-Witten invariants and quantum cohomology"*, University of Bonn. |
| April 19, 2017 | *Cubic fourfolds fibered in sextic del Pezzo surface* | Algebraic Geometry Seminars on *"Rationality problems"*, University of Milano. |
| October 6, 18, 26 and November 02, 30, 2016 | *Gushel-Mukai varieties* | Five lectures, University of Milano. |
| March 09 and 15, 2016 | *Some remarks concerning Voevodsky Conjecture* | Two lectures for the reading seminars on Noncommutative motives, University of Milano. |

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POSTERS

| Data | Titolo | Sede |
|---|---|---|
| July 2, 2019 | *Hyperkaehler geometry of a cubic fourfold via moduli spaces* | Conference on Derived Categories and Geometry in Positive Characteristic, Warsaw, Poland. |
| March 20, 2018 | *Twisted cubics on cubic fourfolds and stability conditions* | School on Birational Geometry of Hypersurfaces, Gargnano del Garda, Italy. |
| October 14, 2017 | *Geometry of Fourfolds with an Admissible K3 Subcategory* | AGNES, Northeastern University, Boston, USA. |
| June 28, 2017 | *Geometry of Fourfolds with an Admissible K3 Subcategory* | GAeL XXV, University of Bath, UK. |

PUBBLICAZIONI

| Libri |
|---|
| [titolo, città, editore, anno…] |
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| [titolo, città, editore, anno…] |

| Articoli su riviste |
|---|
| L. Pertusi, S. Yang, *Some remarks on Fano threefolds of index two and stability conditions,* to appear in IMRN, arXiv:2004.02798. |
| L. Pertusi, *Fourier-Mukai partners for very general special cubic fourfolds,* to appear in Math. Research Letters, arXiv:1611.06687. |
| L. Pertusi, *On the double EPW sextic associated to a Gushel-Mukai fourfold,* J. London Math. Soc. (1) **100** (2019), 83-106. |
| M. Ornaghi, L. Pertusi, *Voevodsky's conjecture for cubic fourfolds and Gushel-Mukai fourfolds via noncommutative K3 surfaces,* J. Noncommut. Geom. (2) **13** (2019), 499-515. |

| Preprints |
|---|
| C. Li, L. Pertusi, X. Zhao, *Elliptic quintics on cubic fourfolds, O'Grady 10, and Lagrangian fibrations,* arXiv:2007.14108. |
| E. Brakkee, L. Pertusi, *Marked and labelled Gushel-Mukai fourfolds,* arXiv:2002.04248. |
| A. Perry, L. Pertusi, X. Zhao, *Stability conditions and moduli spaces for Kuznetsov components of Gushel-Mukai varieties,* arXiv:1912.06935. |
| C. Li, L. Pertusi, X. Zhao, *Twisted cubics on cubic fourfolds and stability conditions,* arXiv:1802.01134. |

| Atti di convegni |
|---|
| [titolo, struttura, città, anno] |
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ALTRE INFORMAZIONI

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| **Professional activity:** |
| **PhD students:** Ethan Robinett, joint with Xiaolei Zhao, University of California Santa Barbara, expected defence in 2022. |

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**Referee for:** Advances in Mathematics, Annales Scientifiques de l'Ecole normale supérieure, Epijournal de Géométrie Algébrique, IMRN, Journal fur die reine und angewandte Mathematik, Kyoto Journal of Mathematics, Mathematische Zeitschrift, Proceedings of the American Mathematical Society.

**Reviewer for:** Zentralblatt-math, Mathematical Reviews.

Reviewer for a grant proposal for the National Science Center, Poland.

**Organized events:**

**September 5-10, 2021:** Workshop on "Geometry of Hyperkaehler Varieties", Hangzhou, China, organized with Emanuele Macrì and Xiaolei Zhao.

**July 5-9, 2021:** Géométrie Algébrique en Liberté XXVIII, Loughborough, UK, organized with Tiago Duarte-Guerreiro, Aeran Fleming, Mauro Fortuna, Lisa Marquand and Mara Ungureanu.

**December 17-18, 2019:** Seminari di Natale 2019, Dipartimento di Matematica F. Enriques, Milano, organized with Alice Garbagnati.

**June 17-21, 2019:** Géométrie Algébrique en Liberté XXVII, Simion Stoilow IMAR, Bucharest, Romania, organized with Valeria Bertini, Aeran Fleming, Jonathan Lai, Mara Ungureanu and Jason van Zelm.

**May 10-11, 2018:** Mini-workshop of Algebraic Geometry, Dipartimento di Matematica F. Enriques, Milano, organized with Paolo Stellari.

**July 21, 2016:** Milano Junior Seminars in Algebraic Geometry, Dipartimento di Matematica F. Enriques, Milano, organized with Martino Cantadore and Mattia Ornaghi.

Member of GNSAGA, Indam.

**Teaching:**

Tutor for Geometry 3, University of Milano, First semester, 2020-2021.

Tutor for Geometry 1, University of Milano, First semester, 2016-2017, 2017-2018, 2019-2020, 2020-2021.

Tutor for Geometry 2, University of Milano, Second semester, 2015-2016, 2016-2017, 2017-2018.

Tutor for Geometry One, University of Torino, Second semester, 2013-2014.

**References:**

**Arend Bayer,** University of Edinburgh, arend.bayer@ed.ac.uk.

**Manfred Lehn,** University of Mainz, lehn@mathematik.uni-mainz.de.

**Emanuele Macrì,** Northeastern University, e.macri@northeastern.edu.

**Paolo Stellari,** Università degli Studi di Milano, paolo.stellari@unimi.it.

Le dichiarazioni rese nel presente curriculum sono da ritenersi rilasciate ai sensi degli artt. 46 e 47 del DPR n. 445/2000.

Il presente curriculum, non contiene dati sensibili e dati giudiziari di cui all'art. 4, comma 1, lettere d) ed

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e) del D.Lgs. 30.6.2003 n. 196.

Luogo e data: _Milano___, __11/01/2021_____

FIRMA _____ *Laura Pertusi* _____