

Massimiliano Alessandro

Curriculum Vitae

Fachrichtung Mathematik
Campus, Gebäude E2 4
Universität des Saarlandes
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🌐 [massimiliano-alessandro.github.io](https://github.com/massimiliano-alessandro)
Last update: March 2024

Personal Data

FIRST NAME: Massimiliano
FAMILY NAME: Alessandro
NATIONALITY: Italian

Current Position

I am currently a **Postdoc (wissenschaftlicher Mitarbeiter)** at *Universität des Saarlandes, Fakultät für Mathematik und Informatik, Fachrichtung Mathematik*, Saarbrücken, Germany.

Postdoc supervisor: Prof. Dr. Vladimir Lazić.

Diplomas

- 2023 **Ph.D. in Mathematics (joint doctoral program)**,
Thesis title: *Constructions and moduli of surfaces of general type and related topics.*
Università degli Studi di Genova, Genoa, Italy.
Dottorato di Ricerca in Matematica e Applicazioni (XXXV ciclo).
Title awarded: Dottore di Ricerca (Dott. Ric.).
Supervisor: Prof. Dr. Matteo Penegini.
Universität Bayreuth, Bayreuth, Germany.
Promotion an der Fakultät für Mathematik, Physik und Informatik.
Title awarded: Doktor der Naturwissenschaften (Dr. rer. nat.).
Final grade: magna cum laude.
Supervisor: Prof. Dr. Ingrid Bauer.
Award date: 25/10/2023
- 2019 **Laurea Magistrale in Matematica (Master of Science)**,
Università degli Studi di Catania, Catania, Italy.
Final grade: 110/110 cum laude.
Thesis title: *Razionalità e irrazionalità di ipersuperfici algebriche.*
Supervisor: Prof. Dr. Francesco Russo.
Award date: 30/09/2019
- 2017 **Laurea in Matematica (Bachelor of Science)**,
Università degli Studi di Catania, Catania, Italy.
Final grade: 110/110 cum laude.
Thesis title: *Superfici a curvatura gaussiana nulla.*
Supervisor: Prof. Dr. Francesco Russo
Award date: 17/11/2017
- 2013 **High School Diploma**,
Liceo Scientifico Statale "E. Fermi", Ragusa, Italy.
State exam at the end of the course of studies in: *Liceo Scientifico Piano Nazionale Informatica (PNI) - Corso Sperimentale Matematica e Fisica con elementi di Informatica.*
Final grade: 100/100 cum laude.
Award date: 08/07/2013

Education

- 2019-2023 **Ph.D. in Mathematics (joint doctoral program)**, *Università degli Studi di Genova*, Italy, and *Universität Bayreuth*, Germany.
Supervisors: Prof. Dr. Matteo Penegini (Genoa) and Prof. Dr. Ingrid Bauer (Bayreuth).
- 2017-2019 **Master Studies in Mathematics**, *Università degli Studi di Catania*, Catania, Italy.
- 2014-2017 **Bachelor Studies in Mathematics**, *Università degli Studi di Catania*, Catania, Italy.
- 10/2012 **English Language School**, "Churchill House School", Ramsgate, UK, Certificate Awarded: First Certificate in English (FCE), Level B2.
- 2008-2013 **Scientific High School**, *Liceo Scientifico Statale "E. Fermi"*, Ragusa, Italy.

Affiliations and Fellowships

- 2024- – **Member of the INdAM-GNSAGA Research Group.**
- 2020-2023 **Member of the PRIN 2020 "Curves, Ricci flat Varieties and their Interactions"**, *Ministero dell'Istruzione, dell'Università e della Ricerca*, 2020KKWT53-003, Principal Investigator: G. Mongardi.
- 2019-2023 **Ph.D. Fellowship "Borsa di Dottorato"**, *Università degli Studi di Genova*.
11/2019-03/2023

Research Visits

- 2021-2023 **Universität Bayreuth**, under the supervision of Prof. Dr. Ingrid Bauer, Bayreuth, Germany.
10/2021-02/2023

Research Fields

Complex algebraic geometry and related topics:

- Construction and classification of complex algebraic surfaces: in particular, surfaces of general type and their moduli space.
- Projective representations.

Publications

2. ALESSANDRO, MASSIMILIANO AND CATANESE, FABRIZIO: *On the components of the Main Stream of the moduli space of surfaces of general type with $p_g = q = 2$* , to appear in "Perspectives on four decades: Algebraic Geometry 1980-2020. In memory of Alberto Collino". Trends in Mathematics, Birkhäuser (arXiv:2212.14872v3).
1. ALESSANDRO, MASSIMILIANO AND GLEISSNER, CHRISTIAN AND KOTONSKI, JULIA: *Semi-Projective Representations and Twisted Schur Multipliers*, Communications in Algebra, vol. 51, no. 10, 4471–4480, DOI: 10.1080/00927872.2023.2211175 (2023).

Papers in Preparation

- ALESSANDRO, MASSIMILIANO AND FRAPPORTI, DAVIDE AND GLEISSNER, CHRISTIAN: *On mixed surfaces*.

Conference Talks

- 06/02/2024 **"Semi-projective representations and diffeomorphisms of complex torus quotients"**. Genova - Torino - Milano Seminar: some topics in commutative algebra and algebraic geometry, *Università degli Studi di Milano, Dipartimento di Matematica*, Milan, Italy.
05/02/2024-06/02/2024

- 05/07/2023 *"CHPP surfaces: a new construction method for surfaces of general type with $p_g = q = 2$ ".* Géométrie Algébrique en Liberté (GAeL) XXX, University of Warwick, Mathematics Institute, Coventry, UK.
03/07/2023-07/07/2023

Invited Talks

- 14/12/2023 *"On the classification of surfaces of general type with $p_g = q = 2$ ".* Seminario di Geometria Algebrica ed Algebra Commutativa, Politecnico di Milano, Dipartimento di Matematica, Milan, Italy.
- 07/11/2023 *"On the classification of surfaces of general type with $p_g = q = 2$ ".* Seminari di Algebra e Geometria Algebrica, Politecnico di Torino, DISMA Dipartimento di Scienze Matematiche, Turin, Italy.
- 05/06/2023 *"On the construction of certain surfaces of general type".* Seminario di Ricerca di Geometria e Algebra, Università degli Studi di Catania, DMI Dipartimento di Matematica e Informatica, Catania, Italy.
- 16/03/2023 *"Equations of families of complex algebraic surfaces with $p_g = q = 2$ ".* Doc in Progress, Università degli Studi di Trento, Dipartimento di Matematica, Trento, Italy.

Research Seminars

- 08/03/2023 *"On a new construction method for surfaces of general type with $p_g = q = 2$ ".* Algebra & Geometry Research Seminar, Università degli Studi di Genova, DIMA Dipartimento di Matematica, Genoa, Italy.
- 06/2022 *"On some surfaces of general type with Albanese map of degree 3".* Oberseminar Algebraische Geometrie - Lehrstuhl Mathematik VIII, Universität Bayreuth, Bayreuth, Germany.
- 11/2021 *"Triple covers of abelian surfaces".* Oberseminar Algebraische Geometrie - Lehrstuhl Mathematik VIII, Universität Bayreuth, Bayreuth, Germany.

Reading Seminars

- 2019-2021 *"On the Minimal Model Program".* Geometry Seminar, Università degli Studi di Genova, DIMA Dipartimento di Matematica, Genoa, Italy (**2 Talks**).
- SS 2022 *"On the classification of algebraic surfaces".* Seminar for graduate students, Universität Bayreuth, Bayreuth, Germany (**2 Talks**).

Undergraduate Seminars

- WS 2021/22 *"Bieberbach groups and flat manifolds".* Seminar for undergraduate students, Universität Bayreuth, Bayreuth, Germany (**1 Talk**).
- 30/11/2017 *"Superfici a curvatura gaussiana nulla".* Talk for undergraduate students, Università degli Studi di Catania, Catania, Italy.

Teaching

- WS 2022/23 **Assistant for exercise classes of the course "Complex Varieties" (Lecturer: Dr. Christian Gleissner),** Universität Bayreuth, Bayreuth, Germany. Topics: *Complex Manifolds, Riemann Surfaces, Differential Forms, Line Bundles, Cohomology.*
- 2020-2021 **Tutor for the undergraduate courses "Algebra Lineare & Geometria Analitica (ALGA)", "Algebra 1" and "Analisi Matematica 1",** Università degli Studi di Genova, DIMA Dipartimento di Matematica, Genoa, Italy.
Academic Year: 2020-2021

Awards and Prizes

- 2016-2017 **Premi incentivanti per studenti iscritti al corso di laurea in Matematica L-35**, *Università degli Studi di Catania*, Catania, Italy.
Academic Year: 2016-2017
- 2015-2016 **Premi incentivanti per studenti iscritti al corso di laurea in Matematica L-35**, *Università degli Studi di Catania*, Catania, Italy.
Academic Year: 2015-2016
- 2014-2015 **Premi incentivanti per studenti iscritti al corso di laurea in Matematica L-35**, *Università degli Studi di Catania*, Catania, Italy.
Academic Year: 2014-2015
- 2012 **Certamen Latinum Mutycense (Editio II)**, *I.I.S. "Galilei-Campailla" (Sez. Classico)*, Modica, Italy, rewarded with Honourable Mention.
- 2011 **Certamen Latinum Aetnaeum (Editio VII)**, *Liceo Scientifico Statale "G. Galilei"*, Catania, Italy, rewarded with Honourable Mention.
- 2008 **Giochi Matematici di Sicilia AICM (Edition XII)**, *Mathematical Olympiads organized by AICM*, Enna, Italy, fourth place.
- 2008 **Premio Letterario "Nicholas Green"**, Ragusa, Italy, winner.

Spoken Languages

- Italian: Mother tongue.
English: Advanced (C1).
German: Beginner (A1).
French: Beginner (A1).

Computer Skills

- C, Python, Singular: Competent
MS Office: Proficient
MAGMA, \LaTeX : Expert

Further Information

- 2012 **First Certificate in English (FCE)**, *University of Cambridge, ESOL Examinations*, Ramsgate, UK, Level B2.
Award date: October 2012
- 2010 **European Computer Driving Licence (ECDL)**, Ragusa, Italy.