

Born on September 11, 1995, in Belluno (BL), Italy.

## Current position

### Université d'Angers - LAREMA

POSTDOC POSITION (2-YEARS FUNDED BY THE ANR GRANT NEWMIRAGE)

- Mentor: Jean-Baptiste Campesato

Angers, France

Sept. 2025 - Aug. 2027

## Past positions

### Université Côte d'Azur - Laboratoire J. A. Dieudonné

DISTINGUISHED POSTDOC POSITION (1-YEAR + 1-YEAR RENEWAL FUNDED BY IDEx OF UNIVERSITÉ CÔTE D'AZUR)

- Mentor: Prof. Adam Parusiński

Nice, France

Sept. 2023 - Aug. 2025

## Education

### Università di Trento

PH.D. IN MATHEMATICS

- Thesis: "Global and local  $\mathbb{Q}$ -algebrization problems in real algebraic geometry"
- Supervisor: Prof. Riccardo Ghiloni
- Referees: Prof. José Fernando (Universidad Complutense de Madrid), Prof. Antonio Lerario (SISSA)
- PhD thesis defence: May 10, 2023
- Final mark: Ph.D. degree in Mathematics cum laude

Trento, Italy

Nov. 2019 - May 2023

### Università di Trento

M.SC. IN MATHEMATICS, ADVANCED MATHEMATICS CURRICULUM

- Thesis: "Semi-algebraic Sets: geometric properties induced by stratifying families of polynomials and model theoretical applications on real closed extensions"
- Supervisor: Prof. Riccardo Ghiloni
- Final mark: 110/110 cum laude

Trento, Italy

Sep. 2017 - Oct. 2019

### Università di Trento

B.SC. IN MATHEMATICS

Final mark: 106/110

Trento, Italy

Sep. 2014 - Sep. 2017

## Scientific Habilitations

2025 **Qualification aux fonctions de Maître de Conférences (Associate Professor)**, Section 25 -  
Mathématiques. Validity: 2025-2029 (5 years).

France

## Fellowships & Awards

2024 **1-year renewal**, My project "Methods of Real Algebraic Geometry" supervised by Prof. Adam Parusiński has been awarded a one-year renewal of the postdoctoral fellowship at the Laboratoire J. A. Dieudonné funded by IdEX of Université Côte d'Azur (IDEX UCAJedi ANR-15-IDEX-01).

Nice, France

2023 **Distinguished postdoc fellowship**, My project " $\mathbb{Q}$ -Algebraicity problems in real algebraic geometry" supervised by Prof. Adam Parusiński has been awarded a distinguished postdoc fellowship in general mathematics funded by the Laboratoire J. A. Dieudonné of Université Côte d'Azur.

Nice, France

## Research interests

My research is mostly related to the field of Real Algebraic Geometry, with a particular focus on the topology of real algebraic sets, as well as semialgebraic, subanalytic, and o-minimal geometry. I am especially interested in how these areas interact with other subjects such as singularity theory, (applied) model theory, and hypercomplex analysis and geometry.

## Publications & Preprints

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### **$K$ -holomorphic functions with definable real part**

ANTONIO CARBONE, ENRICO SAVI

*arXiv:2605.02778 (submitted)*

2026

### **Algebraic realization of stable Poincaré-Reeb graphs**

ENRICO SAVI

*arXiv:2602.18780 (submitted)*

2026

### **The Nash-Tognoli theorem over the rationals and its version for isolated singularities**

RICCARDO GHILONI, ENRICO SAVI

*arXiv:2302.04142 (submitted)*

2025

### **On the first-order theories of quaternions and octonions**

ENRICO SAVI

*Ann. Mat. Pura Appl. (4)*

2026

### **A relative Nash-Tognoli theorem over $\mathbb{Q}$ and application to the $\mathbb{Q}$ -algebraicity problem**

ENRICO SAVI

*Adv. Math.*

2026

### **On the degree of global smoothings for subanalytic sets**

ENRICO SAVI

*Eur. J. Math.*

2024

### **Global and local $\mathbb{Q}$ -algebrization problems in real algebraic geometry**

ENRICO SAVI

*Ph.D. Thesis*

2023

## Membership

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### **New Methods In Real Algebraic GEometry – NewMIRAGE (ANR-23-CE40-0002)**

ANR (AGENCE NATIONALE DE LA RECHERCHE) GRANT

2025-27

- Coordinator: Jean-Baptiste Campesato, Université d'Angers.

### **Géométrie Algébrique et Singularités : Axe Singularités**

CNRS THEMATIC NETWORK

2023-

### **GNSAGA - “Gruppo Nazionale per le Strutture Algebriche, Geometriche e le loro Applicazioni” of INdAM (Istituto Nazionale di Alta Matematica)**

SECTION: “ALGEBRAIC GEOMETRY AND COMMUTATIVE ALGEBRA”

2021 -

### **Theory of hypercomplex functions and applications**

INDAM (ISTITUTO NAZIONALE DI ALTA MATEMATICA) GRANT

2021 - 2023

- Coordinator: Prof. Caterina Stoppato, Università di Firenze.

## Organization

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### **Seminar cycle “Doc in Progress”**

ORGANIZER

*Trento, Italy*

Sep. 2020 - Jan. 2023

- For more information, visit our official [website](#).

## Referee activities

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### **Journal of Algebraic Geometry**

JOURNAL

*J. Algebraic Geom.*

2026 -

### **Annali della Scuola Normale Superiore di Pisa. Classe di Scienze. Serie IV**

JOURNAL

*Ann. Scuola Norm. Sup. Pisa Cl. Sci.*

2026 -

## Invited talks

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- Sept. ,  
2026 **On the first order theory of octonions**, “The 14th International Conference on Clifford Algebras and Their Applications in Mathematical Physics (ICCA)” - Special session: “Function Theories in Cayley-Dickson Algebras”, Universität Erfurt, September 7-11, 2026. *Erfurt, Germany*
- Jan. 23,  
2026 **Le problème d'algébricité sur  $\mathbb{Q}$  en géométrie algébrique réelle**, “Quimperiodique”, Centre Henri Lebesgue, Quimper, January 22-23, 2025. *Quimper, France*
- Nov. 7,  
2025 **Le théorème de Nash-Tognoli sur  $\mathbb{Q}$  & sa version pour les singularités isolées**, “Journées de géométrie algébrique réelle”, Centre Henri Lebesgue - IRMAR, Rennes, November 5-7, 2025. *Rennes, France*
- Oct. 6,  
2025 **The Nash-Tognoli theorem over the rational numbers and its version for isolated singularities**, “Real Algebraic Geometry and Interactions”, Laboratoire J. A. Dieudonné, Nice, October 6-10, 2025. *Nice, France*
- Jun. 12,  
2025 **The Nash-Tognoli theorem over  $\mathbb{Q}$  & the  $\mathbb{Q}$ -algebraicity problem for isolated singularities**, “Singularities in Algebraic Geometry”, Centre Henri Lebesgue, Rennes, June 10-13, 2025. *Rennes, France*
- Sept. 6,  
2024 **On the first-order theory of quaternions (and octonions)**, “Workshop di Analisi e Geometria Ipercomplessa”, Dipartimento di Matematica, Università di Trento, Sept. 5-6, 2024. *Trento, Italy*
- Oct. 31,  
2023 **The  $\mathbb{Q}$ -algebraicity problem in real algebraic geometry**, “Research School in Real Algebraic Geometry”, SISSA and IGAP, Oct. 30 - Nov. 2, 2023. *Trieste, Italy*
- Sept. 4,  
2023 **Subfield-algebraic geometry III: the  $\mathbb{Q}$ -algebraicity problem**, “Spanish+Polish Mathematical Meeting - Real Algebraic Geometry and Singularities (RAGS) thematic session”, Department of Mathematics, Uniwersytet Łódzki, Sept. 4-8, 2023. *Łódź, Poland*
- Aug. 29,  
2023 **On the embeddings of compact manifolds**, “Three days between Analysis and Geometry in Trento: Second edition”, Department of Mathematics, University of Trento, Aug. 28-30, 2023. *Trento, Italy*

## Contributed talks

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- Jun. 23,  
2025 **The Nash-Tognoli theorem over  $\mathbb{Q}$** , “Tame geometry and extensions of functions - Pawłucki 70, Conference in honor of Wiesław Pawłucki's 70th birthday”, Department of Mathematics, Jagiellonian University, June 23-27, 2025. *Kraków, Poland*
- Sept. 11,  
2024 **The  $\mathbb{Q}$ -algebraicity problem in real algebraic geometry**, “Summer School in Real Algebraic Geometry and Hodge Theory”, TU Dresden, Sept. 9-13, 2024. *Dresden, Germany*
- Jul. 26,  
2024 **The  $\mathbb{Q}$ -algebraicity problem in real algebraic geometry**, “18th International Workshop on Real and Complex Singularities - Celebrating the 60th birthday of Juan José Nuño-Ballesteros”, Facultat de Farmàcia - Campus de Burjassot, Universitat de València, Jul. 21-26, 2024. *València, Spain*
- Sept. 15,  
2022 **The topology of real algebraic sets with isolated singularities is determined by the field of rational numbers**, “Real Algebraic Geometry and Singularities, conference in honor of Wojciech Kucharz's 70th birthday”, Department of Mathematics, Jagiellonian University, Sept. 12-17, 2022. *Kraków, Poland*
- May 27,  
2022 **The topology of real algebraic sets with isolated singularities is determined by the field of rational numbers**, “100 UMI - 800 UniPD, First UMI meeting of Ph.D. students”, Department of Mathematics “Tullio Levi-Civita”, University of Padua, May 23-27, 2022. *Padua, Italy*

## Posters

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- Oct. 25,  
2022 **The topology of real algebraic sets with isolated singularities is determined by the field of rational numbers**, “Real Algebraic Geometry”, CIRM, Luminy, Oct. 24-28, 2022. *Luminy, France*

## Seminars

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Apr. 21, 2026	<b>Le problème d'algébricité sur <math>\mathbb{Q}</math> en géométrie algébrique réelle</b> , Séminaire "Ouragan", Institut de mathématiques de Jussieu – Paris Rive Gauche, Sorbonne Université.	Paris, France
Mars 31, 2026	<b>Le problème d'algébricité sur <math>\mathbb{Q}</math> en géométrie algébrique réelle</b> , Séminaire Géométrie des espaces singuliers, Laboratoire Paul Painlevé, Université de Lille.	Lille, France
Mars 19, 2026	<b>Le problème d'algébricité sur <math>\mathbb{Q}</math> en géométrie algébrique réelle</b> , Séminaire de Topologie, Géométrie et Algèbre, Laboratoire de Mathématiques Jean Leray, Université de Nantes.	Nantes, France
Mars 5, 2026	<b>Le problème d'algébricité sur <math>\mathbb{Q}</math> en géométrie algébrique réelle</b> , Séminaire de Géométrie, LAMA, Université Savoie Mont Blanc.	Chambéry, France
Apr. 8, 2025	<b>A relative Nash-Tognoli theorem over <math>\mathbb{Q}</math></b> , Séminaires systèmes dynamiques et géométrie, Department of Mathematics, Université Angers.	Angers, France
Apr. 8, 2025	<b>A relative Nash-Tognoli theorem over <math>\mathbb{Q}</math></b> , Séminaires systèmes dynamiques et géométrie, Department of Mathematics, Université Angers.	Angers, France
Jan. 21, 2025	<b>On the first-order theory of quaternions</b> , Seminario del Dipartimento di Matematica, Department of Mathematics, Università di Ferrara.	Ferrara, Italy
Nov. 14, 2024	<b>The <math>\mathbb{Q}</math>-algebraicity problem &amp; realization of Poincaré-Reeb graphs</b> , Aromath Days, Inria Sophia-Antipolis.	Biot, France
Oct. 7, 2024	<b>The <math>\mathbb{Q}</math>-algebraicity problem in real algebraic geometry</b> , Séminaire sur les Singularités, Institut de Mathématiques de Jussieu-Paris Rive Gauche.	Paris, France
May 28, 2024	<b>The <math>\mathbb{Q}</math>-algebraicity problem in real algebraic geometry</b> , Séminaire de l'équipe AROMATH, Inria Sophia-Antipolis.	Biot, France
May 16, 2024	<b>The <math>\mathbb{Q}</math>-algebraicity problem in real algebraic geometry</b> , Séminaire de Géométrie, LAMA, Université Savoie Mont Blanc.	Chambéry, France
May 9, 2024	<b>On the first-order theory of quaternions</b> , Seminario del Dipartimento di Matematica, Department of Mathematics, Università di Trento.	Trento, Italy
Dec. 12, 2023	<b>The <math>\mathbb{Q}</math>-algebraicity problem in real algebraic geometry</b> , Séminaires systèmes dynamiques et géométrie, Department of Mathematics, Université Angers.	Angers, France
Nov. 23, 2023	<b>Journée de l'équipe ATG: The <math>\mathbb{Q}</math>-algebraicity problem in real algebraic geometry</b> , Séminaire d'algèbre, topologie et géométrie, Laboratoire J. A. Dieudonné, Université Côte d'Azur.	Nice, France
Nov. 16, 2023	<b>The <math>\mathbb{Q}</math>-algebraicity problem in real algebraic geometry</b> , Séminaire de Géométrie et de Topologie de Marseille, Department of Mathematics, Aix-Marseille Université.	Marseille, France
Nov. 8, 2023	<b>The <math>\mathbb{Q}</math>-algebraicity problem in real algebraic geometry</b> , Oberseminar, Department of Mathematics, Universität Tübingen.	Tübingen, Germany
Jun. 12, 2023	<b>(Real) Algebraic Geometry over <math>\mathbb{Q}</math></b> , seminar cycle "BabyGeometri", Department of Mathematics, Università di Pisa and Scuola Normale Superiore di Pisa.	Pisa, Italy
Apr. 20, 2023	<b>(Real) Algebraic Geometry over <math>\mathbb{Q}</math></b> , seminar cycle "Doc in Progress", Department of Mathematics, Università di Trento.	Trento, Italy
Nov. 24, 2021	<b>Algebraic approximation techniques over the rationals</b> , seminar cycle "Doc in Progress", Department of Mathematics, Università di Trento.	Trento, Italy
May 25, 2021	<b>Slice regular functions on real alternative algebras</b> , webinar for the PhD course "Functions of a complex and hypercomplex variable" hold by Prof. Stoppato, Department of Mathematics, Università di Firenze.	Firenze, Italy
Apr. 28, 2021	<b>Tognoli's theorem</b> , webinar for the seminar cycle "BabyGeometri", Department of Mathematics, Università di Pisa and Scuola Normale Superiore di Pisa.	Pisa, Italy
Apr. 20, 2021	<b>What is a semi-algebraic set</b> , webinar for the seminar cycle "What is...?", Department of Mathematics, Università di Trento.	Trento, Italy
Nov. 28, 2020	<b>What is the Nash conjecture</b> , webinar for the seminar cycle "What is...?", Department of Mathematics, Università di Trento.	Trento, Italy

## Teaching activities

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### Algèbre Linéaire (L2 - B.Sc.)

Angers, France

TRAVAUX DIRIGÉS - 28H OF TUTORIALS/EXERCISE SESSIONS

Spring 2026

- Course instructor: Luc Menichi.
- Description: Second course in Linear Algebra focusing on : determinant, n-forms, diagonalization of endomorphisms and applications to linear ODEs.
- Contact: Prof. Jean-Philippe Monnier, Directeur de Département (jean-philippe.monnier@univ-angers.fr).

## Algèbre Commutative (M1 - M.Sc.)

Nice, France

TRAVAUX DIRIGÉS - 14H OF TUTORIALS/EXERCISE SESSIONS

Spring 2025

- Course instructor: Prof. Christian Pauly.
- Description: Master course in Commutative Algebra focusing on commutative rings, localization, A-modules, field extensions and Galois theory.
- Contact: Prof. François Gautero, Directeur de Département (francois.gautero@univ-cotedazur.fr).

## Algèbre Linéaire I (L1 - B.Sc.)

Nice, France

TRAVAUX DIRIGÉS - 19H OF TUTORIALS/EXERCISE SESSIONS

Spring 2025

- Course instructors: Prof. Adam Parusiński and Prof. Ursula Ludwig.
- Description: Second part of the first course in Linear Algebra focusing on vector spaces, linear maps, determinant and diagonalization of endomorphisms.
- Contact: Prof. François Gautero, Directeur de Département (francois.gautero@univ-cotedazur.fr).

## Geometria B - modulo I (B.Sc. in Mathematics)

Trento, Italy

ASSISTANT PROFESSOR

Fall 2020-21-22

- Course instructor: Prof. Riccardo Ghiloni.
- Description: First course in General Topology focusing on metric topological spaces, general topological spaces, quotient topology, notions of connectedness, compactness, separating axioms and classification of compact topological surfaces. My duties consisted in teaching part of the course, both theoretical notions and exercise sessions, preparation and correction of written exams.

## Geometria Differenziale (B.Sc. in Mathematics)

Trento, Italy

ASSISTANT PROFESSOR

Spring 2020-21-22-23

- Course instructor: Prof. Alessandro Perotti.
- Description: First course in Differential Geometry focusing on curves and surfaces in Euclidean three dimensional space with a final introduction to abstract smooth manifolds. My duties consisted in the preparation and correction of exercises sheets and the organization of reception hours.

## Fondamenti Matematici per l'Informatica (B.Sc. in Computer Science)

Trento, Italy

ASSISTANT PROFESSOR

Spring 2020-21-22

- Course instructor: Prof. Riccardo Ghiloni.
- Description: First Algebra course for Computer Science focusing on: induction principle, modular arithmetic, RSA cryptography and graph theory. My duties consisted in teaching part of the course, both theoretical notions and exercise sessions, preparation and correction of written exams.

## Algebra A (B.Sc. in Mathematics)

Trento, Italy

TUTOR

Spring 2019

- Course instructor: Prof. Willem Adriaan de Graaf
- Description: First Algebra course focusing on arithmetic over the integers, rings, unique factorization domains, modular arithmetic, isomorphism theorems for rings, ideals and RSA cryptography.

## Analisi A - modulo I (B.Sc. in Mathematics)

Trento, Italy

TUTOR

Fall 2018-19

- Course instructor: Prof. Raul Paolo Serapioni.
- Description: First Calculus course focusing on functions in one variable, limits, continuity, differentiability, Taylor polynomial, sequences, series, Riemann integral, linear ODEs.

## Analisi 1 (B.Sc. in Physics)

Trento, Italy

TUTOR

Fall 2018-19

- Course instructor: Prof. Raul Paolo Serapioni.
- Description: First Calculus course focusing on functions in one variable, limits, continuity, differentiability, Taylor polynomial, sequences, series, Riemann integral, linear ODEs.

More information on my teaching duties at the Università di Trento is available [here](#).

## Skills

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**Programming** LaTeX (intermediate), MATLAB (beginner), JAVA (beginner)

**Languages** Italian (native speaker), English (intermediate+ - B2 level), French (intermediate - B2 level)