

# Alessio Cipriani

## Personal Details

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Place of Birth: Sansepolcro (AR), Italy.

Date of Birth: 10/06/1990.

Institutional Email: alessio[dot]cipriani[at]univr[dot]it

Website: sites.google.com/view/alessiocipriani

Current Position: Postdoc (RtdA), Dipartimento di Informatica - Settore di Matematica, Università degli Studi di Verona.

## Education

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### **Ph.D. in Mathematics, University of Liverpool, 2015-2020**

Thesis Title: Perverse Sheaves and Finite Dimensional Algebras.

Supervisor: Dr. Jon Woolf.

Submitted: 30/09/2019.

Final Exam: 14/01/2020, Liverpool.

Award Date: 06/04/2020.

Title conferred: 17/07/2020.

Title declared equivalent by the Università of Trento, 01/08/2023.

### **MSc cum Laude in Pure Mathematics, Università degli Studi di Roma, La Sapienza, 2012-2015**

Thesis Title: Intersection (Co)homology, Witt Spaces and their Homology L-class.

Thesis Advisor: Prof. Paolo Piazza.

Title conferred: 24/03/2015.

### **BSc in Pure Mathematics, Università degli Studi di Roma, La Sapienza, 2009-2012**

Thesis Title: Alcuni Metodi Computazionali Discreti (in Italian).

Thesis Advisor: Prof. Valentina Barucci.

Title conferred: 24/10/2012.

## Employment History

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### **RtdA, Dipartimento di Informatica - Settore di Matematica at the Università degli Studi di Verona**

20/12/2022 - 19/12/2025.

### **Postdoc, Institute of Algebra and Number Theory (IAZ) at the University of Stuttgart**

01/10/2022 - 19/12/2022.

### **Postdoc, Università degli Studi di Roma Tor Vergata**

01/05/2021 - 30/04/2022.

### **Temporary Teaching Fellow, Università di Verona**

01/03/2021 - 30/09/2021.

### **Student Demonstrator, University of Liverpool**

01/09/2017 - 30/04/2020.

## Other Roles

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Acted as a referee for Communications in Algebra, Journal of Pure and Applied Algebra, zbMATH.

## Other Positions

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### **Postdoc at the Leonhard Euler International Mathematical Institute in St. Petersburg**

Two year position (extendable to three years); offer received in February 2022 and supposed to start in May 2022.

### **MSCA at the Università di Verona (Call HORIZON-MSCA-2021-PF-01)**

Supervisor: Lidia Angeleri Hügel.

Total score: 86/100 (not funded due to budgetary constraints). The application received the Seal of Excellence on 05/05/2022.

## Research Visits

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### **University of Cumbria, Ambleside Campus**

Short visit (20/01/20234 - 03/02/2024), research stay together with Dr. Jon Woolf (University of Liverpool) financed by INdAM-GNSAGA, CUP E53C23001670001.

### **University of Bonn**

Short visit (20/01/20234 - 03/02/2024), research group of Prof. Dr. Catharina Stroppel.

### **University of Liverpool**

Short visit (01/07/2023 - 08/07/2023), Dr. Jon Woolf.

### **Università degli Studi di Roma Tor Vergata**

Short visit (02/05/2023 - 04/05/2023), Prof. Martina Lanini.

### **Universität Stuttgart**

Short visit (14/01/2023 - 21/01/2023), Institute of Algebra and Number Theory (IAZ).

### **Ruhr-Universität Bochum**

Visiting position (04/05/2022 - 29/07/2022), research group of Prof. Dr. Markus Reineke.

## Research Interests

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Algebraic Topology, Homological Algebra, Category Theory, Representation Theory.

In particular: stratified spaces, algebraic characterisations of perverse sheaves, finite dimensional algebras, quiver representations, silting theory, spaces of Bridgeland stability conditions on the constructible derived category.

Member of GNSAGA-INdAM (Gruppo Nazionale per le Strutture Algebriche, Geometriche e le loro Applicazioni).

## List of Publications

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Wall And Chamber Structure For A Special Biserial Algebra Coming From Perverse Sheaves on  $\mathbb{P}^n$  (with M. Lanini), submitted, arXiv version

When are there enough projective perverse sheaves? (with J. Woolf) (Glasgow Mathematical Journal, Volume 64 , Issue 1, January 2022, pp. 185–196, journal link.

PhD Thesis, Perverse Sheaves and Finite Dimensional Algebras, University of Liverpool, April 2020, 216 pages, DOI: 10.17638/03081420.

## Conferences and Seminar Talks

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**Highest weight categories via stability conditions.**  
MALGA Seminar, Università di Padova.

7th February 2024

**Highest weight categories via stability conditions.**  
Oberseminar Representation Theory, University of Bonn.

2nd February 2024

**A Series of Two Talks on Perverse Sheaves, Seminar Representation Theory, Università di Verona**

Perverse sheaves: introduction and examples. 16th May 2023  
On the global dimension of perverse sheaves. 24th May 2023

**Highest weight perverse sheaves**  
FD Seminar, online. 27th April 2023

**Introduction to gluing simple-minded collections and silting objects** 8th November 2022  
Working group, Algebra Oberseminar IAZ, University of Stuttgart

**Two Lectures on Perverse Sheaves, Algebra Oberseminar IAZ, University of Stuttgart**  
Part 1: Introduction to perverse sheaves and examples. 25th October 2022  
Part 2: Projective and quasi-hereditary perverse sheaves. 8th November 2022

**Quasi-hereditary Perverse Sheaves***12th-16th September 2022*

STAR (Silting Theory, Algebras and Representations), meeting of the Network on Silting Theory, Charles University Prague.

**Perverse Sheaves, Finite Dimensional Algebras and Quivers***12th July 2022*

ABCD-Seminar (Aachen-Bochum-Cologne Darstellungstheorie Seminar), Aachen.

**Coxeter groups and Kazhdan–Lusztig polynomials***3rd-9th April 2022*

Arbeitsgemeinschaft: Geometric Representation Theory (organised by D. Juteau, S. Riche, W. Soergel, G. Williamson), Oberwolfach.

**Perverse Sheaves, Finite Dimensional Algebras and Quivers***28th May 2021*

ARTS (Algebra and Representation Theory Seminar), Università di Roma Tor Vergata.

**Perverse Sheaves and Finite Dimensional Algebras***4th December 2020*

MALGA seminar, online.

**Perverse Sheaves, Finite Dimensional Algebras and Quivers***6th-7th June 2019*

Early Career Topology Researchers, University of Sheffield.

**Perverse Sheaves and Finite Dimensional Algebras***14th-16th April 2019*

Connections and Directions in Representation Theory and Related Topics, University of Leeds.

**Derived Categories, t-structures and Hearts***2nd April 2019*

Working Seminar on Bridgeland Stability Conditions, University of Liverpool.

**Derived Functors***25th October 2017*

Working Seminar on Fourier-Mukai Transforms, University of Liverpool.

**Perverse Sheaves as Modules***30th June 2017*

TTT103 (Transpenine Topology Triangle), University of Liverpool.

**Triangulated Categories***October 2015*

University of Liverpool.

**Organisation**

Topological and Geometrical Methods in Representation Theory, co-organised with Lidia Angeleri, Anna Barbieri, Rosanna Laking.

*15th November 2024*

MALGA (Moduli ALGebre Anelli, seminario Padova-Verona), co-organised with Lidia Angeleri and Jorge Vitória.

*since September 2023*

Working group on "Gluing simple-minded collections and silting objects", Algebra Oberseminar IAZ, University of Stuttgart.

*November - December 2022*

Mini-course (co-organiser with Martina Lanini) "Stability spaces from an algebraic viewpoint", Università degli Studi di Roma Tor Vergata.

*6th-10th June 2022***Languages**

Italian Native Language.

English Fluent (TOEFL certificate).

French, Spanish Basic.

**Teaching Experience****Università di Verona, Semester 1 A.A. 2024/2025.**

Linear Algebra and Analysis [Matricole Pari], Bachelor's Degree in Bioinformatics.

**Università di Verona, Semester 1 A.A. 2023/2024.**

Linear Algebra, Bachelor's Degree in Bioinformatics.

**Universität Stuttgart, Semester 1 A.A. 2022/2023.**

Assistant for Höhere Mathematik 1 für Ingenieurstudiengänge.

**Università di Verona, Semester 2 A.A. 2020/2021.**

Linear Algebra, Bachelor's Degree in Computer Science.

Algebraic Geometry - Methods of Algebraic Geometry, Master's Degree in Mathematics.

**University of Liverpool, Graduate Teaching Assistant and Student Demonstrator.**

Modules including: Linear Algebra, Metric Spaces, Geometry of Curves, Group Theory, Commutative Algebra, Number Theory, Combinatorics.